American Gas Association MONTHLY

Growing Power in Gas Engines

•

Home Planning Bureau Service

•

Averting Peak Load Problems

•

A Candid Opinion of Speeches

•

Hollywood Homes Aid Gas Ads

February 1941

VOLUME XXIII NUMBER 2

New CP Ranger Club Honors and Awards Will Boost CP Range Sales!

The BIG NEWS for 1941! Wider recognition, greater honors PLUS more than 800 CASH PRIZES for CP Gas Range Salesmen of dealers and gas companies registered in the new CP Ranger Club for 1941.

Your salesmen and dealers can win as much as $150 in cash this spring. 56 Monthly cash prizes—141 quarterly prizes—$10 to every man who becomes a Ranger—$15 extra when he becomes a Star Ranger. FREE All-Expense trips to the A. G. A. Atlantic City Convention and handsome new trophies for gas utilities with outstanding CP Range sales records in 1941. Greater publicity and sales helps in 5 big issues of the "CP Ranger News"—sent free to all registered salesmen.

REGISTER *NOW!*

Gas companies should register *now* so that salesmen and dealers can share in the Spring Prize Contests which start March 1st!

FOR FULL DETAILS

Refer to Contest Announcement Broadside just released to all gas companies, or write to *CP Ranger Club Contest Headquarters.*

NEW 168 MONTHLY CASH PRIZES

To Utility and Dealer Salesmen each month, in March, April and May.

NEW 140 QUARTERLY CASH PRIZES

To Dealer and Utility Salesmen for the period of March, April and May.

NEW $25 CASH MEMBERSHIP AWARDS

$10 to Every Salesman who becomes a Ranger—$15 more to Star Rangers.

NEW 7 DIVISIONAL COMPETITIONS

Competition among salesmen in communities of similar population range.

NEW 5 ISSUES OF CP RANGER NEWS

More National Publicity for Sales Leaders.

NEW HOME SERVICE CONTEST

29 Cash Prizes.

7 ALL-EXPENSE TRIPS

To A. G. A. Convention for Leading Utility Salesmen.

7 NATIONAL COMPANY TROPHIES

Division Awards for Leading Companies. National Award for Year's Best Performance.

The CP Ranger Club is sponsored by the American Gas Association and all Cash Prizes are donated by the CP Gas Range Manufacturers of the Association of Gas Appliance & Equipment Manufacturers

AMERICAN GAS ASSOCIATION

420 LEXINGTON AVENUE NEW YORK, N. Y.

American Gas Association MONTHLY

CONTENTS FOR FEBRUARY 1941

Increasing recognition of the gas engine as a load building medium has centered attention on the census of 1940 Gas Engine Power Committee which reveals impressive progress in this field. A digest of the committee's valuable findings is presented herewith. . . . Harry Swenson, who describes a modern home planning bureau, needs no introduction to MONTHLY *readers. He's tops in the field of kitchen planning, decoration and display, and his contributions have appeared frequently in major national household magazines as well as in the* MONTHLY. *With superb artistry he has created model kitchens which are as refreshing as they are livable. . . . Recognition of the new liquifaction process as a major scientific development comes from the* New York Times' *science section whose feature article is reprinted here not because it is news but because it gives some of the background of this major engineering feat. . . . With rare humor and sagacity, Mr. Little puts his finger lightly on the weak spots in many speeches. Between laughs, you'll get some fine pointers on the subject of speech-making. . . . Deke Houlgate writes another chapter in the scenario of "Gas Stars in Hollywood." This time it's a tie-up with Pacific Coast advertising.*

PAGE

43 How Do We Stand in the Continuing Poll of Public Opinion?

44 Growing Power in Gas Engine Field Revealed in 4-Year Survey

47 Designed for Living—Down-to-Earth Service of a Home Planning Bureau.....HARRY SWENSON

50 Cashing in on Kitchen Contest

51 Liquid Natural Gas—Science Solves Peak Load Storage Problem

53 Speaking Candidly—We're a Nation of Speech-Makers and Speech-Listeners.....ARTHUR H. LITTLE

57 Hollywood Homes Add Glamor to Pacific Coast Gas Advertising.....DEKE HOULGATE

59 Personal and Otherwise

61 Natural Gas Executive Group Makes Convention Plans

62 Convention Calendar

63 How to Get the Most Service from Flashlight Batteries .....G. W. FUCHS

65 Order Defines "Original Cost" of Natural Gas Leaseholds .....JAMES COMERFORD

66 Pittsburgh Dealers Sell 4449 Modern Gas Ranges in Single Month

68 CP Broadcasts

70 To Increase, Interpret and Investigate Industrial and Commercial Gas Business.....EUGENE D. MILENER

73 Going Ahead with Industrial Gas

74 Use of Compressed Gas for Checking Gas Gravitometers .....J. W. PENNEY

75 Technical Section Plans Conferences, Maps Defense Survey

76 Research in the Development and Revision of A. G. A. Requirements.....W. B. KIRK

80 Personnel Service

SUBSCRIPTION · $3.00 A YEAR

Published eleven times a year by the American Gas Association, Inc. Publication Office, American Building, Brattleboro, Vt. Publication is monthly except July and August which will be a bi-monthly issue. Editorial Offices, 420 Lexington Avenue, New York, N. Y. Address all communications to American Building, Brattleboro, Vermont, or to 420 Lexington Ave., New York, N. Y. All manuscript copy for publication should be sent to the editorial offices in New York. The Association does not hold itself responsible for statements and opinions contained in papers and discussions appearing herein. Entered as Second Class Matter at the Post Office at Brattleboro, Vermont, February 10th, 1922, under the Act of March 3, 1879.

Cable Addresses: American Gas Association
AMERIGAS, NEW YORK
American Gas Association Testing Laboratories
AMERGASLAB, CLEVELAND

Man at work—An interesting picture of a utility employee putting new piping on a set of cooling coils at the plant of the Knoxville Gas Company. Photographed by Herbert Kerr, this is another $5.00 prize winner in the contest for MONTHLY frontispiece illustrations.

American Gas Association MONTHLY

JAMES M. BEALL, *Editor*

HOW DO WE STAND
. . . . in the Continuing Poll of Public Opinion?

WHEN a big gun fires a high explosive shell a great distance, it not only makes a noise but it does a lot of damage, particularly if it hits its target. On the other hand, a successful public relations program is not a one-shot, high explosive, damaging affair. If properly executed it should be like an irrigation ditch, doing its work so gently that it is hard to realize that it is doing anything at all. Just as the waters of a ditch flow smoothly and gently to the roots of plants and trees and give them life, so a far-sighted public relations program can give life and vitality to a company. Yet, like the irrigation ditch, it must flow smoothly and without interruption.

•

What is this thing called good public relations? It is no superficial and easily achieved goal but something that reaches to the very roots of a company. It is bound up inextricably with every act of every employee from the ditch digger to the president. It is a relentless thing which even reaches into the after-hours conduct of those men who make up a company.

Harford Powell, vice-president of the Institute of Public Relations, last month defined public relations as "good conduct and getting credit for it." He went further and said that any agent who tried to suppress things was out of luck in modern America. "We have no tricks or stunts that can make the public think an unfair price is a fair one, that black is white, or sell something that the consumer doesn't want to buy," he said.

In a discussion of the public relations position of the General Motors Corporation, Paul Willard Garrett expressed a thought which might well be applied to the gas industry. Mr. Garrett said:

"Every day more than 28,000,000 General Motors people are casting a vote for or against us in a sort of informal nationwide poll. These 28,000,000 voters represent our own organization—employees, stockholders, dealers, suppliers and product owners, together with their families. All of these have had some kind of contact with us, and because of this, their judgment of us is accepted."

If we apply the same type of reasoning to the gas industry, we find there is a much bigger poll reflecting the general public attitude toward the gas companies. Last year the gas industry was serving more than 17,000,000 customers in towns and cities with a population of 84,000,000, so that the continuous poll of public opinion, if we may call it such, represents a more than substantial majority of the nation's population.

How does the gas industry measure up in this continuous poll of public opinion and what are we doing to achieve our goal of "good conduct and getting credit for it." No one can answer for every company but on the whole the case for the gas industry is a good one. We have strengthened our operating efficiency, improved our service, lowered our rates. We have given our employees not only insurance protection, medical care, vacations with pay, and good working conditions but we have also given them an insight into our business which they have never had before. Group meetings are sponsored to explain simple facts so that workers may intelligently tell the public these facts, thereby developing mutual confidence. Special reports to employees are made as well as stockholders' reports. The former show the various items in relation to each employee. The latter are greatly simplified and in many cases animated—giving at a glance a full picture of the company's true position and explaining its operations.

•

Continued progress in the gas industry today is largely influenced by the action taken in cementing good public relations. We can do no better than follow the advice of B. C. Adams, of Kansas City, who said that for a chart of good public relations he could suggest none better than the Golden Rule.

Growing Power . . . *in Gas Engine Field Revealed in 4-Year Survey*

IN order to gauge the growing interest on the part of industry in power development by operating internal combustion engines on natural gas fuel, the Gas Engine Power Committee of the Industrial and Commercial Section, American Gas Association, has conducted a survey of natural gas utility companies serving fuel for engine consumption, which shows (1) twice as many gas engine installations as existed four years ago, and (2) greatest development of the field among those enterprises where the smaller sizes of gas engines are adequate for their power requirements.

Industrial Acceptance of Gas Engines

Complete results of the survey are given in the 1940 Report and Gas Engine Census, published by the committee and available through the Association. The survey carefully omits from consideration all gas engines operated by the gas companies themselves, and all engines which are installed on a temporary basis only. Therefore, the conclusions reflect the *general industrial acceptance of gas engines installed on their own merits.*

It is significant that 104 companies responded to the survey, as over and against 14 which responded to similar queries in 1936. It was found that 56 of these natural gas companies are now serving gas for engine operation, to the tune of 12,392,398,000 cubic feet consumed in 7,998 engines developing 474,629 horsepower for 4,496 concerns, and resulting in an annual revenue to the 56 utility companies of $2,643,247. On a grand average, it was found that the average engine horsepower was 59, that 26,110 cubic feet of gas were used per year per horsepower installed, and that annual gas company revenue was $5.57 per horsepower.

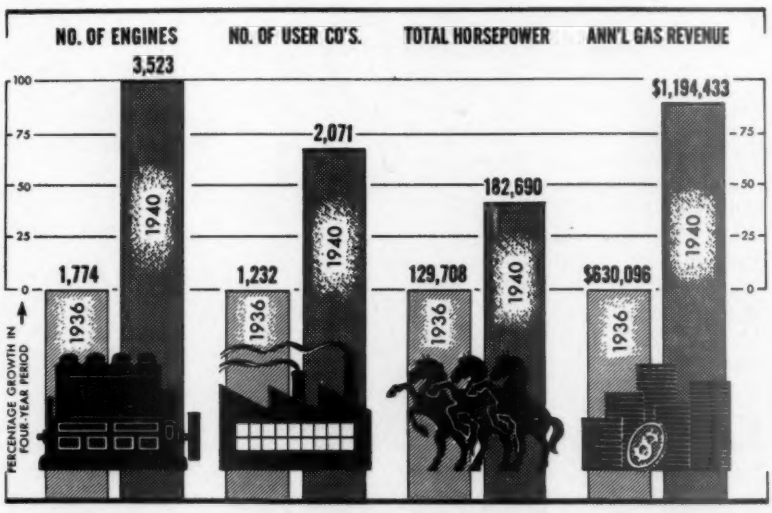
Roughly, 45 per cent of all this gas engine business was served by eight natural gas companies who reported in 1936 as well as in 1940. Hence it was possible to gauge the growth of industrial interest in gas engines as shown in the attached chart. It will be noticed that, for these eight representative companies, the number of engines connected has risen 98.6 per cent, the number of accounts 68.1 per cent, the total connected horsepower 40.8 per cent, and the annual revenue to the gas industry 89.6 per cent. The average horsepower per engine has dropped from 73 to 51.8, showing that most of the new gas engine installations have been in the smaller sizes.

This year 22 engine manufacturers reported producing models for natural gas fueling, a record number. The committee notes in this connection: "While many of these manufacturers have been in the business of manufacturing gas engines for many years, a large number are newcomers to the field. It is particularly significant that many of the manufacturers listed were originally Diesel engine makers exclusively, and have only recently realized the potentialities of gas engine business."

Servicing Facilities Adequate

A limited inquiry among the gas utility companies represented on the committee, with respect to utility servicing and maintenance policies for gas engine accounts, revealed the startling indication that "the supposed lack of servicing and maintenance facilities on the part of the utility is not a problem at all, or a comparatively minor one."

Only one of the reporting companies finds it desirable to provide a complete organization actually to service and maintain gas engines. Six of the eight reporting companies find it necessary only to furnish trained men to perform minor adjustments on the engines and to educate the customers concerning proper engine servicing and mainte-



Four years of growth in the industrial acceptance of natural gas engines for power development—as reported by 8 natural gas utilities serving 45% of the gas engine business reported in 1940 A. G. A. census

nance. The other company did not answer this part of the questionnaire.

All of the reporting companies feel that the existing facilities for maintenance and service are wholly adequate. They report that the extra-utility facilities available consist, for the most part, of manufacturers' service agencies and machine shops. It was the opinion of several of the companies that, although the service facilities are at hand for the customer's use, the customer must be educated to use them.

New Hi-Speed Engines Need Careful Oil Selection

Much of the A. G. A. Committee's report deals with the lubrication of gas engines. Significant among its comments on this subject are the following:

"The selection of proper lubricating oil for the modern gas engine is of the utmost importance if the wear on moving parts is to be reduced to a minimum, thus insuring long engine life and low maintenance costs. The difference in the actual cost of the lubricating oil, between the higher and lower grades of oil, is relatively small due to the low lubricating oil consumption.

"The advent of package power (high speed, multi-cylinder engines as over and against the older large bore, long stroke, slow speed, horizontal types) brought with it difficulties. Speeds have been increased, bore and stroke reduced, and, of course, compression ratios raised considerably. Insofar as oil is concerned, the principal difficulty which arose was the increase in oil temperature due to high velocity rates of circulation and also the limited capacities of lubrication systems. Unlike the lubrication of Diesel engines, the problem of ring sticking has not been a serious one. The principal difficulty encountered has been to control the rate of thickening of oil.

"That this (oil thickening) may be traceable to oxidation, rather than polymerization or precipitation of unsaturates due to sulphur compounds generated in the oil, has been borne out by the fact that changing to oils which had higher inherent stability characteristics, plus the addition of some agent to enhance the stability, seems to have been the answer to some of the difficulties. The test to insure that the percentage of unsaturated compounds, in terms of sulphuric acid solubility, is less than 10 per cent, may be another method of arriving at the same conclusion. For the present, however, it is necessary to analyze each operating condition with extreme care before making any recommendations as to the proper type of oil.

"It is believed that for the high speed multi-cylinder engine SAE 30 or SAE 40 oil should be used, depending somewhat upon the operating temperature of the engine. The viscosity of the SAE 30 oil is between 51 and 68 Saybolt Universal seconds, and the SAE 40 oil is between 57 and 74 Saybolt Universal seconds, at 210 degrees F. It is also believed that an oil should not be used after the viscosity has reached 100 Saybolt Universal seconds. For the heavy duty, slow speed engine, it is advisable to conform to the recommendations of the engine builder as to the type of oil, as they are based upon a number of years of operating experience."

Answers to the inquiries concerning top-cylinder lubrication were neither sufficiently numerous nor positive to permit of definite conclusions. Four of the companies reported that the use of top-cylinder oilers is not a determining factor in the satisfactory operating results of an engine. Two companies stated that their experience has been that engines so equipped show better operating results. One company answered that it has no engines using it. One company did not answer the question.

Of the many markets for gas engine power, refrigeration, ice-making and air conditioning form an important one. Here a 165 h.p. job drives an ammonia compressor in Tulsa—and has served "many seasons continuously with very low upkeep and repair"

"High-Temperature-Cooling" Proved in—Offers Amazing Heat-Recovery Advantages

Continuing its investigations* of "high-temperature-cooling of gas engines" because of the "great possibilities along the line of waste heat recovery coincidental to this method of engine operation," the committee reports on 46 natural gas engines (varying in size from 40 to 250 horsepower) which were observed over periods of from 12 to 18 months of operation at cooling water temperatures from 215 to 230° F. These engines were periodically inspected during operation and subsequently torn down for detailed micrometer inspections. Further, dynamometer tests were conducted on engines equipped with conventional (160° F.) cooling units, then rechecked after being cooled at 212° F.

It is reported that: (1) dependability has been as good in all cases, and in many instances better, than engines operating at lower cooling water temperatures, (2) oil consumptions have been no greater, (3) cylinder wear has been normal, and in some cases phenomenally low, (4) piston rings were entirely free and clean, (5) engine head gaskets of standard materials have held perfectly in all cases, (6) bearings were in excellent condition, (7) condensation (water in oil sump) was entirely eliminated, and (8) dynamometer tests showed a slight increase in engine horsepower under full load conditions with the same quantity of fuel, indicating possible reductions in "oil drag" at higher cooling temperatures.

As a result, the A. G. A. Committee feels that "it is now possible safely to advocate the use of high-temperature-cooling wherever waste heat may be

* Refers to 1939 report of the same committee.

HEAT RECOVERABLE PER B.H.P. (ACTUAL LOAD) PER HOUR

	Actual Engine Load (% of Rated Capacity)		
	100	*75*	*50*
B.t.u. recoverable per brake horsepower hour	5,000	5,700	7,300
Lbs. of steam at 5 lbs. per sq.in. gauge from water at 70° F.	4.15	4.74	6.07
Gallons water at 180° F. from water at 70° F.	5.46	6.22	7.96

NOTE: Full load is based on 70 lbs. per sq.in. B.M.E.P.

utilized to advantage in conjunction with the operation of a natural gas engine." The advantages of waste heat recovery through the "high-temperature-cooling" method, it will be recalled, were: (1) the ability to recover approximately 50% of the heat value of the fuel (in addition to the 25% converted into useful work), (2) waste heat recovery both from jacket water and exhaust gases without upsetting the balance in the engine cooling system or affecting the temperature differential in the engine itself, regardless of variation in operating conditions, (3) automatic compensation for fluctuations in external heat demand or engine load, without attention or adjustment by plant operator.

The quantity of heat obtainable under various engine load factors, utilizing the heat from the engine jacket water and the exhaust gases, has been tabulated above for the assistance of those contemplating "high-temperature-cooling waste heat recovery systems."

In this connection the committee comments: "It is readily apparent that through the use of a simple, dependable and automatic method of waste heat recovery, the field of application for natural gas engines is infinitely broadened. By means of the greatly increased over-all thermal efficiency of the natural gas power unit thus obtained, it is possible to compete with other sources of power where, by reason of poor load factor, the differential in operating costs on a strictly power basis has been insufficient to retire the heavier investment required for gas engines." Actual examples in laundries and wineries were cited.

Development of Natural Gas Reserves Planned by Soviet Industry

NATURAL gas, as one of the resources of the U.S.S.R., has not been considered and developed as it merits, states a recent issue of *Moscoe Industriya*. Because of its high calorific value as a fuel and the properties which make it useful for other purposes, it can and should be the basis for a new industry, say Soviet authorities. Reserves of gas are known to be enormous, though no official estimate of their extent has ever been made, the article declares, and also points out that some geologists calculate these reserves at from 700 to 900 billion cubic meters, or "almost as much as in the United States."

Reserves ready for commercial exploitation are only 50,000,000,000 cu. m., located mainly in the oil fields. Prospecting of the districts where gas only is found is still more backward; reserves are estimated at 375,000,000,000 cu. m., but only 17,500,000,000 cu. m. have been actually located, though this is sufficient to form the basis for a recovery industry.

Gas recovered in the oil fields in 1939 ran up to 2,900,000,000 cu. m., which was used partly in the fields as fuel but was also piped to electric stations, towns, and villages, and used as raw material for new enterprises; but even in the three fields where it is systematically recovered, Baku, Grozny, and Maikop, it is used wastefully and large quantities escape. In other fields the quantity utilized is insignificant; in the five areas concerned, only 300,000,000 cu. m. a year are used.

Potentialities Studied

This year the People's commissariat for the petroleum industry, Narkomneft, has devoted much attention to the problem of natural gas recovery. Prospecting for reserves is at present carried on by the commissariat, by the Committee on Geological Affairs under the Council of Commissars of the U.S.S.R., and by the individual oil trusts. These organizations work without any common plan, scattering their efforts, and often spend years in mapping their areas and getting ready to drill for gas, in order that an estimate of reserves may be made. It is therefore proposed to unify and coordinate the work of all these parties, with the object first of recovering the gas already located and, second, discovering new gas-bearing areas that can be prepared now for exploitation after 1942.

The plan of exploration and operation that is finally adopted is to be obligatory for all agencies involved. Work, it is held, should commence in industrial districts now deficient in local fuel resources, particularly in the central districts of European U.S.S.R., such as the Saratov oblast, where a ready market will consume all the production developed, or Stalingrad.

A recent regulation issued by the Narkomneft forbids the drilling of wells until after all steps for utilizing the gas have been taken; gas should be as carefully conserved as petroleum, both in storage and transport. It is obviously wise to build gasoline and carbon-black plants utilizing natural gas near to the wells, and the units put up should generally be small; large units sometimes take years to build, and in the meantime the wells are nearly exhausted. The Soviets plan to erect, henceforth, small portable units that can be moved when necessary.—*The Oil and Gas Journal.*

A. W. Leonard Is Dead, Natural Gas Leader

A. W. LEONARD, president of the Devonian Oil Company, Tulsa, Oklahoma, and past president of the former Natural Gas Association of America, died January 7. He was 65 years of age.

Born at Turkey City, Pa., an early oil field town, Mr. Leonard's first love was for the drilling rig and the pipe line. His father, J. R. Leonard, was one of the pioneers of the oil and gas industry, and his son followed in his footsteps.

At the age of 14 Mr. Leonard started his gas and oil field training as a pumper for his father. For a time during his earlier years, he was a salesman for the National Supply Co. at Mars, Pa. Later he went into the contracting branch of the industry and was with the Devonian Oil Company during its development in northern Pennsylvania, Ohio and West Virginia. He continued with this company until his death, serving in various capacities until he reached the presidency.

Mr. Leonard went to Oklahoma in 1905 and built the first gas trunk line of any considerable size in the state from the Hogshooter or Ramona field to Muskogee. He was made a director of the Oklahoma Natural Gas Co. in 1916 and in 1922 was placed in charge of operations. He was vice-president of this company and the Devonian Oil Co. when he headed the Natural Gas Association of America in 1925-1926. He has been a member of the American Gas Association since 1927.

Home Planning Bureau where customers are free to browse or ask questions

Designed for Living . . . *Down-to-Earth Service of a Home Planning Bureau*

By Harry Swenson

Director, Display & Home Planning Bureau, The Peoples Gas Light & Coke Co., Chicago, Illinois

THERE is no let-up of interest in modern kitchens. Whether shown in actuality or as pictures, the kitchen is sure to draw interest. By now no one is surprised at the clearly functional aspect of the kitchen for it has been fused with color and decorative details to make the kitchen more dramatically interesting than any room in the home. Well designed, it can be efficiently shipshape and decoratively interesting.

Make no mistake in thinking that the kitchen is interesting only to the proverbial home-body, for men and women in every walk of life are attracted to the 20th century look of the modern kitchen. It is an expression of modern design to be classed with the car, the plane, and the train of today, and in its way as interesting and important.

In a recent radio round table discussion in which the speakers were Mrs. Roosevelt, Clifton Fadiman, Archibald McLeish, and Louis Wirth, this fragment was heard:

Partial view of a complete exhibit kitchen on the main sales floor. Note the eating nook on the left

Mr. McLeish: "And even on a commercial level, wouldn't you agree that there are few things really more beautiful than the inside of a well furnished kitchen?"

Mrs. Roosevelt: "Very few things, particularly when they use copper."

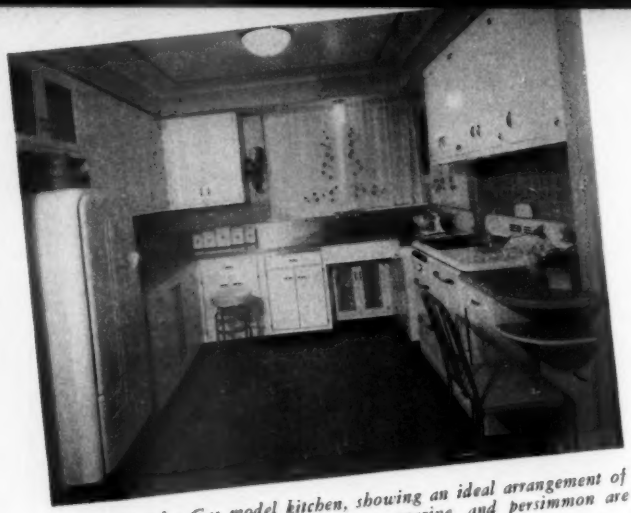
Mr. McLeish: "Right."

Mr. Fadiman: "Why is it that the kitchen is always the best furnished room in the house? I have never understood that."

Mrs. Roosevelt: "Because it is the pleasantest room in the home if properly used."

Mr. Fadiman: "Certainly designers have used more ingenuity in designing kitchens than they have in designing living rooms."

Mr. Wirth: "Now you're coming



Another Peoples Gas model kitchen, showing an ideal arrangement of appliances and work centers. Gray, aquamarine, and persimmon are the colors used

Another view of the complete exhibit kitchen shown on the preceding page. Soft blue, butter yellow, and misty red are the predominating colors

down to earth as far as I am concerned."

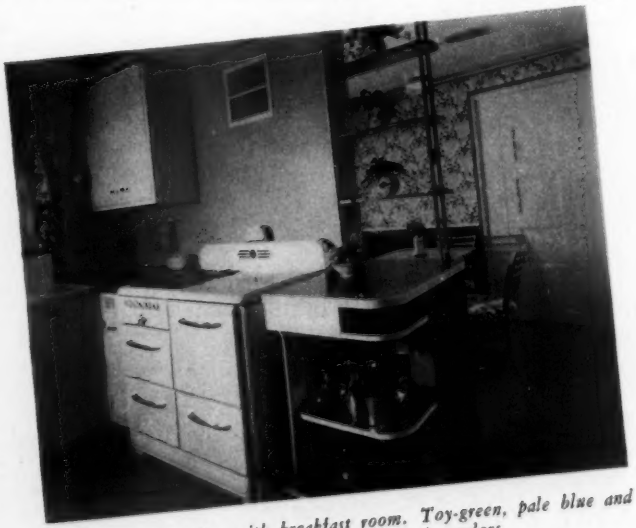
And that is a fact, we're down to earth as far as kitchen design is concerned and that is why it has a general and fundamental appeal. A kitchen appliance, beautiful in itself, is even more beautiful when seen in its proper setting. But this setting, if a model kitchen, must be believable. It must carry the conviction that the gas range and the gas refrigerator belong in the modern kitchen and will perform all we claim for the appliances.

Considerable floor space at The Peoples Gas Light and Coke Company is given over to display of complete model kitchens. Nowhere else in the city can one see so many or so completely furnished kitchens. This display with the service of the well established Home Planning Bureau has made the company's downtown office a mecca for anyone interested in kitchen equipment or any phase of kitchen design.

The Home Planning Bureau performs a unique service. With capable attendants to answer all questions regarding construction, equipment, materials, and decoration and with trained planning architects to make actual plans, the customer is certain to receive a satisfactory answer to any question asked. With actual kitchens to demonstrate arrangement, decoration, and kitchen practice, attendants and salespeople can give a truly personal demonstration of every kitchen feature.

The thoroughness of this gas company service is well known; the value of it is recognized not only by home owners but by architects, builders, real estate management, building managers, contractors and, of considerable importance, by dealers of kitchen equipment other than gas appliances. These last are often in a position to sway the customer's decision as to fuel and appliances; therefore, close cooperation with this influential group is highly desirable. They, in their turn, are eager to have gas company approval of their merchandise, especially if this can be done by having their sinks and cabinets displayed in the company's model kitchens. Through such displays innumerable prospects are reached and referred to the respective dealers. This practice has been found worthwhile as the cabinet dealer or his contractor is in a position to speed up the sale of kitchen equipment.

Actual sale of the gas appliance seldom takes place until the near completion of the remodeling but the choice of fuel and the selection of the appliance are usually made as the plans are designed. It is at this time the Planning Bureau's influence is most important.



Large model kitchen with breakfast room. Toy-green, pale blue and stop-light red are the decorative colors

Typical single wall apartment house kitchen in the show room of the apartment house section

Note the compactness of this single wall apartment house kitchen. There are several in the section, each featuring different equipment

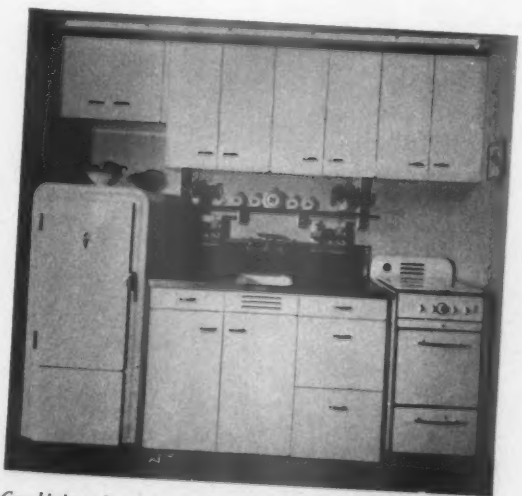
An unusually cheerful kitchen exhibit. Its gleaming white gas appliances look perfect against a wall of fire wagon red. Other colors are soft gray and little touches of yellow

In Chicago many large, dated apartment buildings are being remodeled into smaller apartments. The location of the kitchen and the necessary facilities for it may impose a problem that can be solved only by experience and thorough study of the project. In all such jobs questions of practicability and price of construction and equipment are deciding factors in the remodeling program. These questions confront the gas company salesman the moment he contacts the owner of the building, the architect or contractor. The ability to supply an answer is often a determining factor in the salesman's chance of remaining in the race for this piece of business.

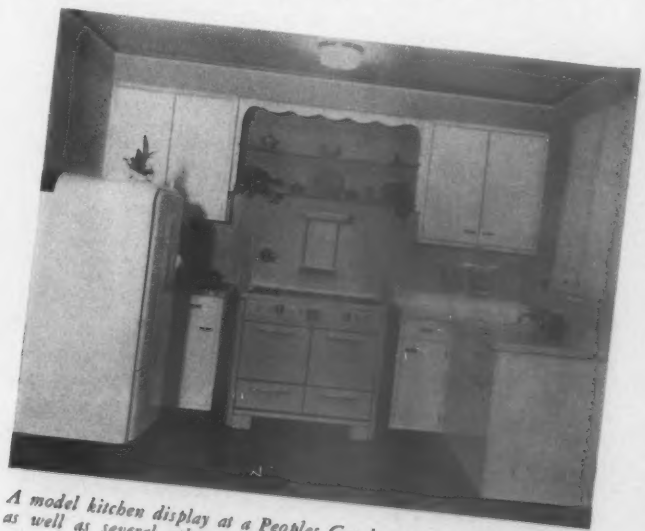
A thoroughly prepared plan of the project with all data of size, price and type is an effective aid to closing the sale. Realizing this, the Home Planning Bureau functions in close cooperation with the Architect's Section and the Apartment House Division of the Sales Department in the preparation of plans and gathering of kitchen data. If required, a planning expert will accompany the salesman in his call at the architect's or owner's office, then and there to answer any questions beyond the salesmen's realm.

There are today more and more demands for a complete cost figure on kitchen installation, embracing all equipment required for the kitchen. Since we are in the business of selling gas and gas appliances exclusively, we cannot give the answer on complete kitchen installations. This must be done in cooperation with the dealer selling the other equipment required, hence a necessity for close cooperation with cabinet and sink manufacturers who may also be on the job with bids at the same time the gas company salesman makes his offer.

The Planning Bureau also functions as liaison between the gas company and the equipment dealer with the result that bids on complete kitchens can be made when this kind of bid is required. In the display room of the Apartment House Section, apart from the main showroom, five typical apartment house kitchens are shown, each representing a different type of installation of cabinets, sinks, gas ranges and refrigerators. The prospective buyer of this equipment can readily see the space required, the installation method, and the organization of the various units that go to make up a kitchen just as a home-maker can see complete home kitchens on the sales floor. Visual selling through displays of actual kitchens has proven its value when coupled with competent kitchen planning service.



Combining beauty and practicality, this apartment house kitchen exhibit has attracted considerable attention from those who live in confined spaces



A model kitchen display at a Peoples Gas branch office. This kitchen as well as several others in the group exhibit is designed to fit a modest budget

The judges—Ruth Soule, home service director, The Brooklyn Union Gas Company; Elizabeth Beveridge, equipment editor, Woman's Home Companion; *and R. W. Brown, camera editor, New York Sunday* Times

The winnah! Gardiner P. Bissell, of Portland, Oregon

Cashing in on Kitchen Contest

BELOW is the kitchen awarded the first prize of $250 in the recent Photographic Kitchen Contest sponsored by the American Gas Association. It was photographed by Gardiner P. Bissell, Portland, Oregon, who is joyously waving his check in the picture above.

U-shape in arrangement, the kitchen conforms to modern standards of efficiency. It is uncluttered with detail yet has plenty of eye appeal. The photography was considered tops among the amateurs by the trio of judges.

Winner of the second prize of $100 was Ross O. Major, Chicago, Illinois, and the $50 check for third prize went to Mrs. Lya Gray, New York City.

Prize winning photograph taken by Mr. Bissell. The all-gas kitchen is located in Life House No. 1 for 1940, built as an all-gas equipped exhibition home at Lake Oswego, Oswego, Oregon. It is owned by Miss Margaret Castlio

R. G. Barnett, left, vice-president and general manager of Portland Gas & Coke Company, presents the first prize of $250 to Mr. Bissell. John J. Winn, commercial manager, is the interested onlooker

Liquid Natural Gas . . . *Science Solves a Peak Load Storage Problem*

- **The accompanying article on the liquefied natural gas plant at Cleveland, Ohio, appeared in the Science section of the *New York Times*, Sunday, January 19. Written by Waldemar Kaempffert, science editor of the *Times*, it gives some of the background and engineering principles involved in this development—hailed as the outstanding achievement of 1940.**
- **First extensive discussion of this development took place at the A. G. A. convention last October in a paper by J. A. Clark and R. W. Miller entitled "Liquefaction, Storage and Regasification of Natural Gas."**

WHEN a cold snap comes, natural gas companies must prepare for sudden demands from factories and households. In the gas fields men turn valves and let more gas flow into the service lines. After the cold snap has passed the same men reverse the operation.

Why don't the natural gas companies use gasometers, like those in which manufactured gas is stored in any big city? The answer is expense. So the natural gas companies use exhausted gas fields as storage reservoirs and pipe lines during the Summer months.

Struck by the limitations thus imposed, a few ingenious inventors began to think of ways to help the natural gas companies. The result is a system of reducing natural gas to a liquid—from which Cleveland will be the first to derive benefit this Winter.

It has taken about twenty years to develop this new method of storing natural gas in liquid form. The story begins in 1920. Knowing that any gas can be liquefied and that when it is cooled to about minus 250 degrees Fahrenheit and thus liquefield, 600 cubic feet of it can be stored in a volume of only one cubic foot, Godfrey L. Cabot of Boston patented a simple type of insulated container which could be installed on specially designed river barges. Then came Lee S. Twomey in the Thirties with patents that covered methods of liquefying, storing and delivering natural gas by means of pipe lines.

H. C. Cooper, then president of the Hope Natural Gas Company, an affiliate of the Standard Oil Company of New Jersey, wrote the next chapter in the story. He was struck by the work the Bureau of Mines had been doing in liquefying natural gas and then extracting the helium from it. In 1937 he developed a method for utilizing liquefied gas.

Many Difficulties Met

When it came to applying all these inventions in building a plant large enough for a whole city the size of Cleveland, technical difficulties were encountered. A pilot plant erected by Mr. Cooper in West Virginia made it clear that metallurgists, physicists and engineers would have to solve some stiff problems.

Natural gas is a complex mixture. It contains some water and carbon dioxide. As natural gas is cooled in the liquefying process both freeze into solid chunks that plug pipe lines. A way had to be found to remove both water and carbon dioxide.

Natural gas also contains some nitrogen and other gases. These cannot be liquefied at minus 250° F. So they, too, must be removed.

Next it was discovered that steel in pipes and tanks becomes so brittle at 50° below the Fahrenheit zero that it breaks like glass when struck with a hammer. This meant that a special alloy had to be developed.

To keep the liquefied gas in a storage tank so that it would not turn into gas again (the outer air is like a red hot stove to the liquid gas in the tank) an insulating material had to be found. This was the easiest problem of all. Cork proved to be the material needed.

The East Ohio Gas Company, which buys some of its natural gas from the Hope company and sends it through parallel pipe lines 120 miles long, decided to build for Cleveland the first plant for the storage of liquid gas. The first step in the process of liquefaction is cooling. A principle known to every high school boy who studies physics is applied. It is this: Compress a gas, suddenly release the pressure and the gas expands with a drop in temperature. Liquid carbon dioxide, for example, when it is allowed to hiss out of a steel flask, drops like so much snow, showing that it has been further cooled by expansion to the solid state.

Gas Cooled by Ammonia

To cool the natural gas, ammonia is used. Cooled under pressure, this ammonia serves in turn to chill ethylene, previously compressed and cooled with water. When the cooled ammonia is released (expanded) its temperature drops. The ethylene gives up its heat to the ammonia, cools and liquefies. Whereupon the liquid ethylene takes up heat from the natural gas and cools that to about minus 130° F. The natural gas is now liquefied, but under a pressure of 600 pounds, which is much too high for practical use. So valves are opened and the liquefied natural gas expands. As the pressure drops from 600 pounds to that of the atmosphere (14.6 pounds) there is a further reduction in temperature to minus 250° F. So we have liquefied natural gas at atmospheric pressure.

Spherical containers were built of welded plates composed of a special steel alloy which remained tough at low temperature. Each container is surrounded by a shell of ordinary steel. The inner sphere is fifty-seven feet in

diameter and the outer sixty-three. The lower half of the space between the two spheres is filled with solid cork blocks three feet thick, and the upper half with powdered cork. Because the outer shell must support the weight of the full inner sphere the cork blocks are used for the lower half as a sort of foundation. Dry gases also circulate within the space between the two spheres to obtain still better insulation.

Despite all this care to keep out the heat of the outer world a little gas is bound to evaporate. This does no harm. As a matter of fact the evaporated gas is so cold that it helps to maintain the low temperature of the liquefied gas. Excess evaporated gas flows into the pipe lines. Before the natural gas in the inner sphere is delivered it is heated to 60° F. in a continuous process.

Cleveland's plant, now almost ready for service, can liquefy 4,000,000 cubic feet of gas a day. Its three huge spherical storage tanks hold 600,000 gallons of liquefied natural gas—the equivalent of about 150,000,000 cubic feet of ordinary gas. The plant costs far less than a pipe line of equivalent capacity. It can be shut down for virtually three seasons in the year and spring into action when cold weather comes.

Bigger Jobs for Gas

Current advertising of the Michigan Consolidated Gas Company in Detroit which points with pride to the part gas is taking in speeding up national defense production. Building national security with the aid of gas is the live theme.

Coal Shortage in Japan Forces Gas Rationing

THE coal shortage in Japan has resulted in a drastic rationing of manufactured gas for the winter, according to Mrs. Louise C. Mann whose uncensored article on public utilities in that country appears in *Public Utilities Fortnightly*, January 2. The reduction is said to average about 15 per cent of the amount consumed in the last six months, even though no gas was consumed during the summer. Restaurants are cut from 25 per cent to 40 per cent for cooking, but government buildings only 10 per cent.

Mrs. Mann related the following incident relative to the general situation:

"As I was sitting shoeless on the floor of a well-to-do Japanese home I complained of feeling chilly. The host apologetically explained that the authorities had only two days before sealed the plug for the gas stove attachment, and had also removed one of the three gas burners in the kitchen. Japanese homes have no central heating, and oil furnaces are, of course, unknown."

McCall's Dream Room Kitchen Contest

MORE than 2,000 women who entered the Dream Kitchen Contest sponsored by *McCall's Magazine* wrote to association Headquarters prior to December 31, the closing date of the Contest, for literature which would assist them in preparing plans for their dream kitchen. Two booklets were issued from Headquarters. One was "Your Personalized All-Gas Kitchen" and the other was "Save While You Cook" which deals exclusively with the special features found in CP gas ranges.

Separate Department To Handle Taxes

THE Consolidated Edison Co. of New York, Inc. has taken a new step to simplify and coordinate its tax-paying problems which have multiplied so rapidly in recent years. A centralized department known as the Department of Taxes—General, has been set up through which all matters relating to taxes are cleared. This department will handle the voluminous and periodic returns filed by the system companies, the maintenance of innumerable supporting office records and statistical data, as well as keep up-to-date on changes in taxing statutes, rulings and court decisions.

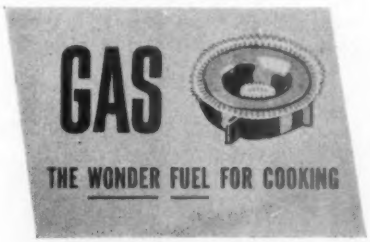
In announcing this change in the company's magazine "Around the System," Franklin H. Nickerson, vice-president, pointed out that operating taxes payable directly by the Consolidated system companies during 1940 will equal approximately 22.7 cents out of each dollar of revenue from sales of service. This compares with an expenditure of 13.1 cents per dollar of revenue in 1931. Mr. Nickerson said that the increase in taxes payable by the companies in 1940 over 1929 approximated $32,700,000, or about 128 per cent. The increase in operating revenues for that same period was only 11 per cent.

House Heating Sales Records Shattered

ALL previous records for the sale of gas house heating equipment were shattered by The Philadelphia Gas Works Company during the latter months of 1940. During the peak sales period, September through November, 530 gas heaters were sold for installation on the company's lines. This represents a 310 per cent increase over the figures for the same period of 1939. A. B. Eckert is house heating supervisor for the company.

The new economy of gas heat provided by reduced rates, served as the spearhead of this unusually successful campaign. People in every walk of life, particularly families owning the average type Philadelphia row-house, can now afford the clean effortless comfort of automatic gas heating.

Counter Card Reproduces National Ad Slogan



COMPANIES which point up their local promotion efforts to tie-in with the themes and slogans of the gas industry's national advertising program are making effective use of the counter card, "Gas—the Wonder Fuel for Cooking," reproduced here. This card is silk-screened in three colors, size 12 x 6 in., and is equipped with an easel back. It is an ideal card for display in windows, counters and in advantageous locations on the sales floor. It sells for 25 cents, postage extra. Orders should be addressed to American Gas Association, Committee on National Advertising, 420 Lexington Ave., New York, N. Y.

Gas Lighting in 1803

Gas manufactured from distilled coal or wood was used for lighting in Richmond, Va. in 1803.

Illustrations by Warren Chappell

Occasionally, address the chair. Thus you will keep the chairman awake, and his laughter and bright-eyed interest may infect your listeners out front

Speaking Candidly . . . *We're a Nation of Speech-Makers and Speech-Listeners**

By ARTHUR H. LITTLE

HAVING introduced the speaker, the chairman sits down. Perhaps in his soul he wonders what he has brought down upon his fellows. But, come what may, he has done his duty.

Now the speaker arises, adjusts his spectacles, and clears his throat. And from there on, almost anything can happen, and often does.

We're a nation of speech-makers and of speech-listeners. Even as business men, we find time to assemble in conventions and conferences and forums to hear men talk; and, on his own, every man among us seems willing, at the drop of a chairman's nod, to arise and expound.

Under the law of averages, it follows that much of the speech-making to which we listen and to which we, as speakers, compel our peers to listen, rates less—and often distressingly less—than perfect. To raise the level of speech-making quality and thus to contribute something to the understanding and the comfort of business-men audiences is the hopeful purpose of these lines; and they come from the experience and from the heart of one who, heaven knows, has listened to more than his share of business-men speeches and, may the Lord forgive him, himself has addressed business men many, many times.

And now, let's reason together.

You have been asked to speak. It will be a luncheon or a dinner or a convention. How shall you proceed?

1. Be sure that you have something to say.

2. To clinch Point No. 1, pick your own subject. If the program committee prefers something else, strike a compromise that will enable you to stake out within the prescribed subject those areas that you are qualified to discuss.

3. Decide—and decide early!—whether you will read your speech from manuscript, deliver it from notes, or, having written it and memorized it, give it to 'em barehanded. Probably you will be wise to decide to read. Certainly you will be wise to decide against mixing your methods. As Tom Hendricks, ex-lecturer, used to tell his public-speaking classes at the Cleveland Advertising Club, a speech half-read and half-recited "*can* be deadly dull."

4. Bear in mind that a speech is neither an essay, nor even an essay standing on its hind legs. Rather, regard what you are to undertake as a stage-set conversation.

5. Draw up an outline, but leave the outline open—this to the end that, before you write your speech, you may discuss with your colleagues its tentative scope and its development. Thus, before you write it, you may think

* Reprinted by special permission from *Dun's Review.*

about your speech in the watches of the night. Thus your speech will gain in logic and grow in strength.

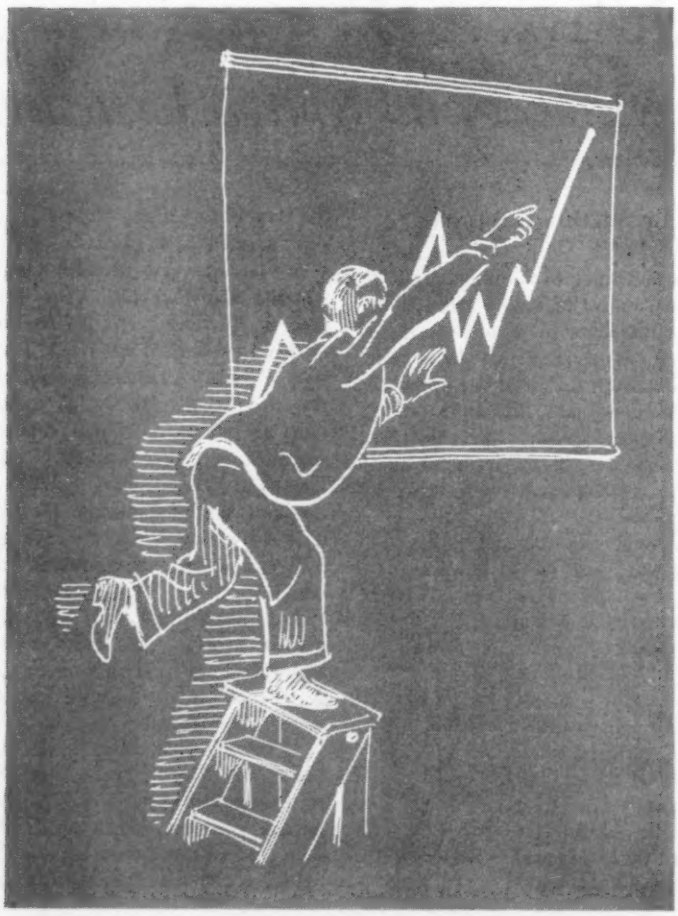
6. During this stage, carry a notebook or a sheaf of cards. Thus you may impale many an important idea and, perhaps, many a striking phrase.

7. When you sit down to write, determine to write simply. Keep your sentences short. Avoid involvement. Remember that, although *you* will be reading, your hearers will be listening, and the ear, beset by a complexity of verbiage, cannot go back and re-hear.

8. Although you write simply, fear not the devices of rhetoric. Look well to the arrangement of sentence-elements; and, in particular, watch closely your sentence-endings. For the end of every sentence, reserve the sentence's high spot—as Genung puts it, "the goal of the assertion." Within the strictures of grammatical rectitude, you may write: "Here in America, the jobbing system is amply justified, with our great area." But, because the mind remembers best what the ear hears last, your sentence will gain in force if you line it up like this: "Here in America, with our great area, the jobbing system is amply justified."

Your speech will suffer no serious harm if, here and there, you brighten it with a gleam of imagery. With the concept of "a cross of gold," William Jennings Bryan stampeded a convention and brought down upon himself a Presidential nomination.

If you illustrate your speech with charts, see to it that they are big enough to be read by everyone present



Here and there, without harming either you or your hearers, your speech may rise above the prosaic; and for these passages you will do well to consider the effectiveness of such rhetorical expedients as analogy. Invoking his imagination and bringing to bear a salty line of diction, Emerson set an example in expression—and enacted a speakers' code—when he wrote: "A man cannot speak but he judges himself. . . . Every opinion reacts on him who utters it. . . . It is a harpoon thrown at a whale, unwinding as it flies a coil of cord in the boat; and if the harpoon is not good, or not well thrown, it will go nigh, to cut the steersman in twain, or to sink the boat."

9. Stick to your subject. However inviting they may seem, eschew all stop-overs and side trips.

10. Within the structure of your speech, cement the parts. Our language abounds in connectives—words whose particular and peculiar function is the joining of thought to thought and passage to passage. Besides, careful diction will enable you to enlist as a connective almost any word. At Gettysburg, Lincoln opened his dedication address with a sentence in which, for our present purpose, I shall italicize certain phrases: "*Four score and seven years ago* our fathers brought forth on this continent a new *nation, conceived* in liberty and *dedicated* to the proposition that all men are created equal." A master of English, Lincoln knew the force of contrast and the power of repetition. Thus (note again the italicized words) his second sentence:

"*Now* we are engaged in a great civil war, testing whether *that nation,* or *any nation* so *conceived* and so *dedicated,* can long endure."

Connectives in Lincoln's English? Read the whole address, underlining every connective element, and you'll find it difficult to decide which words *not* to underline!

11. If you are to illustrate your speech with charts, see to it that your charts are big enough to be read. In advance, find out the dimensions of the

While you are being introduced, relax and breathe deeply a half-dozen times

room in which you are to speak. Then at the distances at which your hearers are to sit, set up your charts and test their lines and their text for visibility. Test them from the back row.

12. Although you are about to engage in a stage-set conversation, what really will ensue will be, not a monologue, but an argument with every person within the sound of your voice. Respect your hearers' opinions. Answer, in your discourse, their every silent question.

13. But, because your hearers will believe that you are delivering a speech, close with that which they, knowing custom, will expect. Close, as you like, with a summation or even with a peroration. But close!

14. Having written it, rehearse your speech. Read it aloud. Read it to test and to correct its sound. Read it over and over to familiarize yourself with every sentence and phrase and word.

So much for the speech's preparation. Now for its delivery:

1. While you're being introduced, breathe deeply a half-dozen times. Physiologically, deep breathing seems to offset the effects of stage fright. But really, why should you be scared? You're here at this table or on this platform to tell this audience, these friendly, receptive, sympathetic men and women, something they don't know. You're here to tell these men and women about something in which you believe, something of which you, rightfully, are proud, or something by which you are deeply stirred. Afraid? It is they, your hearers, who sit unprotected. You have come inspired and prepared—you stand in armor!

2. While you are being introduced—if you are to speak from behind a luncheon or banquet table—clear a space before you for your manuscript or your notes. Clear it of dishes and of rolls and of silverware. Thus you will guard against presenting a combination speech and juggling act.

3. While you are being introduced, lay aside your cigar or cigarette. Until you have finished and sat down, touch nicotine not at all! Your audience hopes to hear eloquence, unstrained through tobacco leaves.

4. If you are to speak from behind a lectern, you will have examined that lectern in advance and have made sure that, without peril to your continuity, it will hold your manuscript or your notes. An avalanche of papers sliding off a hip-roofed lectern in the midst of a speaker's speech does not help. Also, if you are to speak into a public-address system, you will have met, in advance, the microphone and acquainted yourself with its peculiarities, particularly its mode of adjustment for height.

5. As, finally now, you face your hearers, face them squarely, chin up. Let them see and feel the confidence you feel. Let them believe, as they have every right to believe, that *this* is going to be good, that you believe in it.

6. From your first word, whether you open from your manuscript or speak for a moment extemporaneously, speak loudly enough to be heard in the farthest row of chairs. Your hearers expect you to address them all, and in full. To confide your opening sentence to the wax works on the platform, or to swallow those sentences within your own cosmos, is to cheat and to offend many of those who, after all, are paying for this seance.

7. Read with expression. Addressed to adults, this admonition may sound unnecessary; but you—even you—

While you are being introduced, lay aside your cigarette. The audience has come to see you too

would be surprised. Read in phrases. Subordinate the unimportant words, the articles and adjectives and adverbs, and hit hard the nouns and verbs. To emphasize a word, don't shout it: prolong its vowels. Chant the word. Overdo? Don't worry. You'll not.

8. As you read, respect your mother tongue. Read your words as they are spelled. *Company* is neither *compny* nor *cumpny,* but *com-pa-ny. Department* is neither *dapartment* nor *departmunt,* but *de-part-ment. Government* is neither *guvmunt* nor *guvvament,* but *gov-ern-ment.*

9. Read with zest. Read with energy. Read with relish. Your first obligation to your hearers is to interest. And if this thing seems to fall short of interesting you, how can it interest them?

10. Read sustainedly. Avoid the mistake, entirely too common, of assuming that, once you're under way, your audience will follow. Keep your voice up and your energy unbraked. Avoid, too, the mistake of lulling yourself, by your own voice, into a state of soliloquizing coma. Your audience hasn't assembled to hear you talk in your sleep.

11. Occasionally, address the chair. In your speech, here and there, you will have interpolated the words, "Mister Chairman." Thus you will keep the chairman awake; and his interest, as made manifest by his bright-eyed expression and by his laughter at your jokes, may infect those out front.

12. Occasionally, test your hearers' interest. And here is a trick that, to my knowledge, is exposed in print for the first time. Shift your position. Move to the right or left—and watch the heads. If, in unison, your hearers' heads shift, too, thus to keep this fellow in sight, you still have your listeners with you. But if the heads move not at all, but rather seem petrified, then you confront two alternatives: either go into your quickest and funniest story, or skip the next four pages and close.

13. Close strong. Your best, as you think, may be pretty poor. But give 'em your closing with both barrels and with the throttle wide.

14. If you must submit to questioning, leave it to the chairman to announce, after you have finished, that you're willing to be grilled. No more perfect anticlimax can be imagined, I submit, than that presented by a speaker who, having closed his prepared remarks in a blaze of glory, gulps a swallow of water and, resignedly, adds: "Well, I guess that's about all. Are there any—ah—questions?"

. . .

Nationally, unanimously, we Americans go for speech-making and for speech-listening. Whether as speakers we speak and sweat or as listeners we sit and suffer, we love it!

West Virginia Gas

The land owners of West Virginia lease between four and five million of their 15,540,480 acres for gas and oil purposes. Up to the end of 1939, 63,400 oil and gas wells had been completed in West Virginia. Of these, at the end of that year, some 17,953 oil and 13,451 gas wells were active.

Indianapolis Reports Record Gas Sales

RECORD increases in gas consumption and number of gas meters in service have been reported by officials of Citizens Gas and Coke Utility, Indianapolis, Ind., for the year just ended.

Total gas consumption for 1940 reached the unprecedented volume of almost 4½ billion cubic feet (4,429,951,000) an increase over 1939 of more than 500 million cubic feet. Average daily gas consumption hit an all-time high of 12 million cubic feet, a 36% increase over 1935.

Domestic gas consumption showed an increase of 132,567,000 cubic feet over 1939. Commercial gas consumption increased 23¾ million cubic feet while the house heating bracket increased 143 million cubic feet. A new all-time high was reached by industrial gas consumption: Over one billion cubic feet of gas was used by Indianapolis industries in 1940 averaging better than 3 million cubic feet per day.

Another Hollywood All-Gas Scoop

THE American Gas Association's Publicity & Advertising Committee has issued a promotion bulletin to gas companies requesting them to be on the look-out for a new M-G-M—Pete Smith technicolor short showing close-up action shots of a Certified Performance gas range and a gas refrigerator. The title of the picture is "Penny to the Rescue." Featured players are Prudence Penny, noted newspaper home economics expert, Billy Newell, who supplies the comedy element, and a group of personable males.

The picture will be shown first in Loew's Theaters around the end of January and will then be made available to all theatres. This is the third occasion on which Metro-Goldwyn-Mayer has produced a short feature subject showing modern gas appliances exclusively. In its latest production, "Penny to the Rescue," Miss Penny cooks up a batch of intriguing dishes and gives a number of valuable cooking hints. Pete Smith serves as commentator.

Incorporated in the promotion bulletin requesting local companies to tie-up with the showing of the picture is proof of a ready-to-use newspaper mat reproducing three scenes from the picture. The cost of the mat is forty cents, plus postage.

Any amount will do. . . . So thinks Billy Newell as he adds baking powder to the cake batter. A scene from "Penny to the Rescue," Pete Smith's newest specialty cooking short for Metro-Goldwyn-Mayer

There's a trick to frying potatoes and Prudence Penny demonstrates how it's done in the new feature which co-stars modern gas appliances. It's a one-reeler, photographed in Technicolor with Will Jason directing

Hollywood Homes . . . *Add Glamor to Pacific Coast Gas Advertising*

Mary Martin and her lovely home are the first of a group of top-ranking Hollywood stars who will be featured in advertising of the Pacific Coast Gas Association this year. Gas appliances, of course, are cast in a supporting role. The series was conceived by A. C. Joy, Pacific Gas & Electric Co., chairman of the P.C.G.A. Advertising Committee, and J. S. Spaulding, Southern California Gas Co., member of the committee

By Deke Houlgate

"SEE the Homes of Movie Stars. . . ." Along any of Hollywood's wide boulevards, signs which carry this slogan are plentiful. In fact, the opportunists who elect to reveal the domicile whereabouts of Moviedom's celebrities carry on one of Hollywood's biggest little industries.

For a price, of course, a visitor may "see the homes of movie stars" in one of several ways. He may purchase a ticket on a bus fully equipped with megaphoning spieler.

Less regimented but more expensive and popular is the personal guidance service. For only a few dollars the visitor obtains the chauffeuring and conversational talents of a worldly young man who will drive your car with breath-taking recklessness up steeply pitched roads to hide-away homes of cinema stars.

For the jallopy trade there is a third or cut rate opportunity. Two bits, four bits, a dollar will purchase a recently printed map which reveals all! After that the tourist must do his own foraging.

Regardless of how the visitor's curiosity is satisfied, two things are certain to happen.

From a moving vehicle he will see only the shrub-hidden fronts of beautiful homes; and he will VISIT BEL AIR!

Cognizant of this far-reaching interest, the Pacific Coast Gas Association decided to base its present year's advertising campaign on "homes of the stars."

This happy decision provided one more opportunity to tell the world that in Hollywood where the best is standard equipment, natural gas as a fuel and modern gas appliances closely approach universal use.

Each month, throughout the year, in advertisements prepared by the Gerth-Knollin Agency, this association will personally conduct a trip through the home of some celluloid celebrity.

Starting in January magazines, with the popular and glamorous Mary Martin and her home, the series will continue in February with an advertisement featuring the comfortable gas-equipped home of Fred MacMurray. Other equally prominent actors and their homes will make "personal appearances" during the remainder of the series.

It was only natural that the first step should have been in Bel Air where that new darling of the Paramount lot, petite Mary Martin, and her husband have a "home" in the best sense of that word.

From its cozy den, crammed with books, to its cheerful patio in the rear of this rambling showplace, every touch

First advertisement in the series appears in January issues of Pacific Coast magazines

gives the impression that here is a house in which its owners really live.

Every room, including the large kitchen, has its quota of freshly cut flowers. The walls of den, hallways and living room have been brightened by the hanging of old prints, many of them collector's items. Three cheerful fireplaces, one of them a combination hearth and barbeque pit in the patio, show regular use. And even here, gas plays its part. A trio of kindling cheaters—gas burners which start the logs burning—solve one of those little home making problems cleanly and quickly.

Automatic gas-fired furnaces, however, bear the brunt of the Martin heating requirements.

Just a word, now about Mary Martin who sang her way into the hearts of theatre goers and movie producers with her inimitable rendition of "My heart belongs to Daddy. . . ."

Mary, now a full fledged Paramount headliner, slipped into town as a question mark that quickly became an exclamation point when Hollywood had a chance to make an appraisal.

Starred in Paramount's current hit, LOVE THY NEIGHBOR, Mary Martin has definitely embarked on a long and colorful screen career, with all the traffic lights at green.

Meat on the March with Gas Tie-up

HAVE you noticed those beautiful advertisements on meat that have been appearing in magazines and newspapers within recent months? They are the backbone of a $2,000,000 cooperative national advertising program sponsored by one of the liveliest trade organizations in America, the American Meat Institute. One of the objectives of the campaign is to bring about a better appreciation of meat and stimulate a greater demand for it, thus benefiting the retailer, the packer and the producer.

The A. G. A. Committee on National Advertising is maintaining close contact with the American Meat Institute in developing ways and means whereby both the gas and the meat advertising programs may be of benefit to each other. Preliminary conversations have been held, arrangements have been made for coordinated publicity, photographs have been exchanged, one of the forthcoming meat advertisements will show a roast coming out of the oven of a gas range, and very soon other evidence of a get-together nature will be forthcoming.

By the time this appears in print a portfolio describing the second quarter of the meat industry's comprehensive campaign will have been issued to gas company members of the Association. Also, home service departments will have been supplied with sample copies of the booklet, "Medley of Meat Recipes," the basic information for which comes from the authoritative National Live Stock and Meat Board. Distribution of these publications throughout the gas industry was made possible by the American Meat Institute.

Study the meat campaign. Watch its progress (it's going great guns) and ask your local packers and meat distributors how you can tie-in profitably with it. The two campaigns are "naturals" for effective follow-through.

This attractive advertisement of the American Meat Institute is one of a series designed to promote greater consumption of meat

There's a chart for cooking meats, too!
GAS low temperature roasting of meats gives you all these important advantages:
Thrifty cuts cooked the new approved low temperature way turn out full-flavored, tender and juicy . . . with important vitamins preserved. With Gas you can enjoy meats cooked just as you like them.
ATLANTA GAS LIGHT Co.

An effective advertisement of The Atlanta Gas Light Company, one of the first to tie in with the meat advertising campaign

National Defense Items

THE increasingly important part played by the gas industry in national defense preparations is described in some forty brief news stories and "fillers" recently distributed to the industry. This material is designed for publication in the news columns of the local press, in special newspaper sections, and in company magazines, and may also be used as basic data in talks made by company officials before local civic and other organizations. By addressing your inquiry to the Committee on National Advertising, American Gas Association, 420 Lexington Ave., New York, N. Y., you may receive a copy, free of charge.

Selling Technique

ONE way to sell is to overpower the customer with big display advertising constantly applied month after month, year after year. If one does not have money for this perhaps equal or better results can be secured with a little money mixed with a lot of imagination. Recently the Wisconsin Public Service Corporation offered appliance buyers a credit of 75 per cent of the increase of his service bill for two years. The offer applied to purchases made from dealers. The company estimates that in some cases the credit will pay the entire cost of the appliance.

New Photo Service

PHOTO Service No. 10 of the A. G. A. Committee on National Advertising, the latest edition of the popular series reproducing the most recent illustrations appearing in the national ads and including, as well, photographs of all-gas kitchens, has been distributed to the industry. Sales and advertising managers and editors of gas company publications constantly use this service as a source for attractive 8 x 10 glossy prints.

Included in the latest edition are four pictures of prepared meat dishes supplied by the American Meat Institute, sponsors of the current $2,000,000 advertising campaign designed to increase the consumption of meat. An extra copy of Photo Service No. 10 may be had by sending your request to Committee on National Advertising, Association Headquarters, New York.

Personal AND OTHERWISE

Consolidated Edison Makes Important Changes in Executive Set-up

William C. Morris

Hudson R. Searing

James F. Hunter

Leland B. Bonnett

IMPORTANT organization changes planned to bring about a further combination of electric and gas operations of the Consolidated Edison Co. of New York, Inc., and affiliated companies, were made at a recent meeting of the board of trustees. Three new vice presidents and six assistant vice-presidents, representing both the electric and gas sides of the business, were named. As a result, several groups of employees and departmental and bureau functions were realigned to fit in with the new executive set-up.

William Cullen Morris, vice-president in charge of gas operations, and Howard W. Leitch, vice-president in charge of electric operations, who have passed the System's retirement age, were relieved of administrative duties, and will act hereafter as consultants on special assignments from President Ralph H. Tapscott.

Both Mr. Morris and Mr. Leitch have been with Consolidated System companies throughout their business careers, Mr. Morris having joined the Consolidated Gas and East River Gas Companies as an engineer's assistant in 1896 soon after graduation from Stevens Institute.

Mr. Morris has held many important engineering posts in both the gas manufacturing and construction fields of the Edison System. He also served as an officer and director of various gas companies which were merged into Consolidated Edison. In 1927 he was appointed vice-president of Consolidated Gas, a title which he retained when the company was merged into Consolidated Edison. Enduring monuments to Mr. Morris' work are the Hunts Point plant, two water gas units at Astorio, the Astoria Tunnel and the Tower of Light at Irving Place, all built under his direction.

C. C. Simpson

The three new vice-presidents are: Hudson R. Searing, engineer of operation in the electric field, who became vice-president in charge of electric and gas operation and electric production; James F. Hunter, assistant vice-president, who became vice-president in charge of technical service and gas production; and Leland B. Bonnett, engineer of design and planning, who became vice-president in charge of design, inventory, purchasing and stores.

Earl L. Griffith, engineer of gas maintenance and construction, was made assistant vice-president for construction and shops, and Colin C. Simpson, engineer of gas distribution, became assistant vice-president, gas and electric operation and electric production.

There will be only one exclusive gas division—that of gas production and pressure control, with Mr. Hunter as the vice-president in charge. J. L. Vaiden and those people under him in the former gas distribution department have been transferred to Mr. Hunter.

Customer service (gas) has been merged with the distribution operation department with C. E. Hickey as manager and C. E. Muehlberg as assistant manager. Mr. Muehlberg was formerly assistant engineer, gas distribution.

Murphy Heads Electric Bond & Share Co.

SAMUEL W. MURPHY, vice-president of Electric Bond & Share Co. for the last four years, was elected president Jan. 23 to succeed S. R. Inch, who resigned recently to devote all his time to the presidency of Ebasco Services Inc.

George G. Walker, who has been with the Bond & Share system for more than fifteen years, was elected vice-president.

The officers of Electric Bond & Share Co. now are C. E. Groesbeck, chairman; Mr. Murphy, president; Mr. Walker, vice-president; L. B. Wiegers, secretary and treasurer, and H. F. Ray, assistant secretary and assistant treasurer.

Sedwick and MacPherson Get Promotions

AT a recent meeting of the board of directors of Public Service Co. of Northern Illinois, H. P. Sedwick, general manager, and W. J. MacPherson manager of industrial relations, were elected vice-presidents of the company. Mr. Sedwick will continue to serve as general manager and Mr. MacPherson will remain in charge of the company's industrial relations.

Mr. Sedwick joined Public Service in 1913. Mr. MacPherson started work in 1911 for the Northwestern Gas Light & Coke Co. which was later consolidated with the Public Service company.

Manufacturers Name Lyle C. Harvey

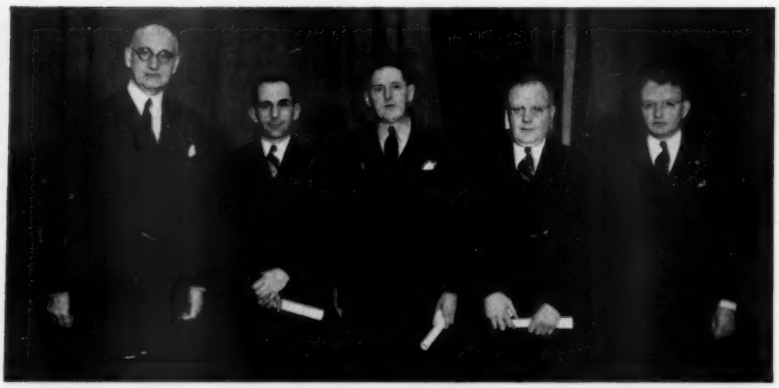
Lyle C. Harvey

IN order to aid in the expansion of increased activities, the Association of Gas Appliance and Equipment Manufacturers recently elected Lyle C. Harvey to the newly created post of 2d vice-president, it was announced by W. E. Derwent, president of the Association.

Mr. Harvey, who is president and general manager of the Bryant Heater Company, Cleveland, Ohio, has been identified with the gas industry for the past two decades, particularly in the gas appliance field and is responsible for many innovations in the merchandising of gas heating and air conditioning appliances.

Mr. Harvey is also a director of the Dresser Manufacturing Company, Bradford, Pa., and is chairman of the Association's Committee on Laboratory Activities.

Win Coveted Awards for Life-Saving



High officials of the Public Service Electric & Gas Co., Newark, N. J., joined employees and friends at a meeting in the Public Service auditorium on December 9 to pay tribute to three of the company's men who rendered outstanding acts of life-saving. Photographed at the meeting were: P. S. Young, chairman of the Executive Board; Julian Waltz, lineman, who was awarded the Edison Medal for resuscitation from electric shock of a fellow employee; William Howe, substation operator, and Joseph Bell, mechanic, both of whom received McCarter Medals for successful resuscitations by the prone pressure method; and W. R. Smith, safety engineer

R. S. Agee Leaving A.G.A.E.M. Post

R. S. Agee

R. S. AGEE, sales promotion manager of the Association of Gas Appliance and Equipment Manufacturers, New York City, leaves that organization on February 1, to become vice-president of the Roberts & Mander Stove Company, Hatboro, Pa., makers of Quality cooking equipment and one of the oldest manufacturers in the range industry. Mr. Agee's duties with the Association will be assumed by John E. Bogan, field counsellor for the CP Gas Range program of the A.G.A.E.M.

Mr. Agee has been in charge of the CP Gas Range promotional activities for the Association for approximately three years, coordinating the merchandising and promotional programs of department stores, dealers and utility companies. He has represented the industry in both Canada and the United States, and because of his extensive platform work and his wide promotional and merchandising experience with utility companies and dealers, frequently has been termed the country's "Number 1 Range Salesman."

Mr. Agee was active in the industry for eight years prior to joining the Association, having started with the Washington Gas Light Company, Washington, D. C., as a door-to-door appliance salesman, later assuming the successive posts of sales supervisor and sales promotion manager with the same organization.

H. S. Minster, president of Roberts and Mander Stove Company, announced that Mr. Agee's new connection is in line with Roberts and Mander's new progressive policy, which includes expanded distribution and increased sales promotion service for retail outlets.

Ramsey Gets New Post in Philadelphia

H. N. Ramsey

THE Philadelphia Electric Company, through its president, Horace P. Liversidge, has announced the appointment of H. Nedwill Ramsey as purchasing agent in place of R. G. Rincliffe, who has been made manager of the Station Operating Department.

Mr. Ramsey was born in Flemington, N. J., attended Central High School in Philadelphia, and was graduated from the University of Pennsylvania as a mechanical engineer in 1920.

He entered the service of the American Gas Company as engineer in 1920, and later became assistant to the general superintendent. In 1927 he became affiliated with the U.G.I., and in 1931 was placed in charge of real estate operations for the United Engineers and Constructors, Inc. Since 1934 he has been president of the Welsbach Company.

Mr. Ramsey has been active in national gas association affairs. He was chairman of the A.G.A.E.M. Gas Water Heater Division during the successful "Prize Parade" campaign in 1937, also chairman in 1938, and is a past chairman of the A.G.A.E.M. Advisory Committee and present chairman of the General Policy Committee. He took an active part in the Gas Wonderland exhibit at the New York World's Fair, being a vice-president of Gas Exhibits, Inc.

Boston Home Service Director Retires

Margaret P. Fossett

MARGARET P. FOSSETT, well-known to thousands of Greater Boston housewives, retired December 31, as home service director of the Boston Consolidated Gas Company, after six years of service at that post. She is succeeded by Susan A. Mack, who has had long experience with the company.

Appointed director of the company's home service department in September, 1934, after eight years as a lecturer, Miss Fossett brought an expert knowledge of modern gas cookery to this field and has contributed cooking information and assistance to many thousands of the company's customers in personal contact and through her many lectures and cooking classes.

Susan A. Mack

She is a member of the Zonta Club, the women in business section of the New England Home Economics Group, and the Evening Alliance Club of the Roslindale Unitarian Church.

Reynolds Gets Servel Service Medal

WILLIAM REYNOLDS, of New York, advertising manager of Servel, Inc., received a special fifteen-year service medal from Louis Ruthenburg, president, at the company's mid-Winter sales conference held during the week of January 13 at the McCurdy Hotel in Evansville, Indiana.

In making the award Mr. Ruthenburg cited Mr. Reynolds for his excellent record and outstanding work during his fifteen years of continuous association with Servel.

Wins College Home Economics Award

EMILY GOEHRING, of Runge, Texas, has been awarded the annual scholarship at Texas College of Arts and Industries, Kingsville, for junior Home Economics students established in 1934 by Frank C. Smith, president of the Houston Natural Gas system. The award, which is made through the Tex-Mex division of the Houston system, carries with it a check for $100 and is decided by the college authorities.

One of ten children, Miss Goehring has had a brilliant college career. She has 15 A's, 5 B's and no lower grades to her credit thus far in college. She is president of the local chapter of Kappa Omicron Phi, national honorary home economics fraternity and is a member of Alpha Chi, national honorary scholarship society.

Home Service Meeting in Kansas City

THE home service worker's job is to make the customer like the company and no other employee is better equipped or in a better position to do this essential task, B. C. Adams, president of The Gas Service Company, Kansas City, told the annual home service meeting at Kansas City, December 27 and 28. Mr. Adams was one of the principal speakers at the meeting which was attended by all members of the home service departments of the Gas Service Co., the Kansas City Gas Co., and the Wyandotte County Gas Company. Most of the program consisted of visual demonstrations and presentations by outstanding women in a variety of fields.

F. M. Rosenkrans, new business manager of The Gas Service Company, who had charge of the meeting, complimented the home service women on their fine work. C. C. Young, assistant new business manager, reviewed the CP gas range program and discussed plans of the A. G. A. range.

Major T. J. Strickler, vice-president of the Kansas City Gas Co. and president of the American Gas Association, discussed the rapid growth of home service departments throughout the country.

Other speakers included H. C. Porter, Kansas City Gas Co.; Jack Torbert, Wyandotte County Gas Co.; Albertine Berry, chairman, A. G. A. Home Service Committee; Jessie McQueen, A. G. A. home service counsellor; Florence C. Plondke, National Livestock and Meat Board, Chicago, and Alma C. Swenson, Wheat Flour Institute, Chicago.

The meeting was considered the best ever sponsored by these companies.

Natural Gas Executive Group Makes Annual Convention Plans

COMMITTEES of the Natural Gas Section of the American Gas Association held important meetings on January 6 in St. Louis, Mo., to discuss various phases of the Section's activities. Those who met were: Executive and Managing Committees, Accident Prevention Subcommittee, Industrial and Commercial Gas Sales Committee, Main Technical and Research Committee, and the General Program Committee.

One of the most important matters discussed was the program for the Natural Gas Convention to be held on May 5, 6 and 7 in Hotel Adolphus and Baker Hotel, Dallas, Texas. The program for this 36th annual meeting was fully outlined and preliminary arrangements completed. Subjects and speakers selected for the various sessions and conferences assure the natural gas men that their three days in Dallas will be packed with interesting and recent information on trends in their industry.

It is again planned to use the symposium for subject presentation since this method guarantees a complete and open discussion of vital problems. Speakers of national reputation in research, advertising, etc., will take part in the 1941 program. More complete details will be printed in the next issue of the A. G. A. MONTHLY.

Because of last year's record attendance in Houston and the interest already shown in the 1941 meeting natural gas men are advised to make hotel reservations early. If you have not already received a hotel reservation blank write to E. H. Poe, Secretary, Natural Gas Section, American Gas Association, 420 Lexington Ave., New York, N. Y.

Luncheon meeting of committees of the Natural Gas Section at the Statler Hotel, St. Louis, Mo., January 6. In the photograph are, left to right, around the outside of the table: A. H. Muncy, Canadian River Gas Company, Amarillo; C. H. Koinm, The Gas Service Company, Kansas City; P. A. Alberty, The Ohio Fuel Gas Company, Columbus; James H. Motz, Atlanta Gas Light Company, Atlanta; R. H. Huffman, Oklahoma Natural Gas Company, Tulsa; W. H. Adams, Manufacturers Light & Heat Co., Pittsburgh; A. W. Breeland, Lone Star Gas Company, Dallas; Q. R. Dungan, Cities Service Gas Company, Bartlesville; Thos. R. Weymouth, Columbia Gas and Electric Corp., New York; Alexander Forward, American Gas Association, New York; Geo. F. Mitchell, The Peoples Gas Light & Coke Co., Chicago; Hon. J. D. James, Chairman, Missouri Public Service Commission, Jefferson City; L. W. Childress, Laclede Gas Light Company, St. Louis; G. W. Parker, Mississippi River Fuel Corp., St. Louis; Harry D. Hancock, Chairman, A. G. A. Natural Gas Section, and President, Gas Advisers, Inc., New York; H. C. Cooper, Hope Natural Gas Company, Pittsburgh; J. French Robinson, Vice-Chairman, A. G. A. Natural Gas Section, and President, The East Ohio Gas Company, Cleveland; E. H. Poe, Secretary, A. G. A. Natural Gas Section, New York; D. P. Hartson, Equitable Gas Company, Pittsburgh; C. B. Mershon, Manufacturers Light & Heat Co., Pittsburgh; Irving D. Ross, The Peoples Natural Gas Company, Pittsburgh; H. E. Bates, The Peoples Gas Light & Coke Co., Chicago; T. H. Kerr, The Ohio Fuel Gas Company, Columbus; R. E. Wertz, Amarillo Gas Company, Amarillo; Will C. Grant, Lone Star Gas Company, Dallas. Right to left, inside of table: Ben C. Comfort, Mississippi River Fuel Corp., St. Louis; R. H. Hargrove, United Gas Pipe Line Co., Shreveport; F. M. Rosenkrans, The Gas Service Company, Kansas City; Wm. D. Thompson, The Laclede Gas Light Company, St. Louis; R. S. Wenner, The Ohio Fuel Gas Company, Toledo; E. L. Rawlins, Union Producing Company, Shreveport; Julian L. Foster, Lone Star Gas Company, Dallas; A. I. Snyder, Michigan Consolidated Gas Company, Detroit; Eugene D. Milener, American Gas Assn., New York; and D. W. Chapman, The Peoples Gas Light & Coke Co., Chicago.

Appliance Manufacturers Will Hold Exhibit

THE Association of Gas Appliance and Equipment Manufacturers will hold an exhibition of gas appliances, accessories and equipment in the Municipal Auditorium, Atlantic City, N. J., the week of October 20, 1941, it has been announced by W. E. Derwent, president of the association and vice-president of the George D. Roper Corp., Rockford, Ill. The exhibit will be held concurrently with the American Gas Association's 23rd annual convention being held during the same week.

Due to the prominent display of gas appliances and equipment at the Gas Industries Building at the New York World's Fair and at the gas pavilion at the San Francisco Golden Gate International Exposition, other exhibits were not held while the fairs were in progress. This will be the first national exhibit of gas appliances since 1936 and, with an estimate of over 200 manufacturers participating, it is expected that it will be the most successful ever held under the auspices of the gas industry.

The following are members of the exhibition committee: Lucian Kahn, chairman, Estate Stove Co., Hamilton, Ohio; H. P. Boncher, Dresser Manufacturing Co., Bradford, Pa.; W. S. Guitteau, Stacey Brothers Gas Construction Co., New York, N. Y.; F. J. Hoenigmann, Cribben & Sexton Co., Chicago, Ill.; George S. Jones, Jr., Servel, Inc., Evansville, Ind.; R. H. Lewis, Ruud Manufacturing Co., Pittsburgh, Pa.; Norton McKean, American Meter Co., Albany, N. Y.; H. T. Ryan, Robertshaw Thermostat Co., Youngwood, Pa.; R. E. Towne, Surface Combustion Corp., Toledo, Ohio.

Pacific Coast Gas Association

O. R. DOERR, chairman of the sales and advertising section of the Pacific Coast Gas Association announces that the annual Spring Sales Conference will be held in Los Angeles, Thursday and Friday, March 6 and 7. While the conference program is not fully formulated some portion of the time will be devoted to meetings of special groups—such as dealer contact men, new construction men, commercial and industrial sales engineers, and domestic promotion supervisors. Each group will be invited to discuss its peculiar problems and if it desires, prepare recommendations for the consideration of the executive committee.

March 27 and 28 have been selected by C. P. de Jonge, chairman of the Technical Section, as the dates of the Annual Spring Technical Conference. The conference will be held in Los Angeles. The program will consist of discussions on the newest methods in gas engineering under the leadership of the section's committee chairmen—J. F. Sauer, distribution; M. L. Fort, production; H. P. George, transmission; and John Mueller, utilization.

Programs for each meeting will be mailed to P. C. G. A. members about two weeks before the event.

A Silent Virtue

Blessed is the man who, having nothing to say, abstains from giving wordy evidence of it.—*George Eliot*

Packer Joins Payne

FRANK PACKER, for 35 years connected with the recently liquidated Welsbach Company, has joined the Payne Furnace and Supply Company, Beverly Hills, Calif., Mr. Packer became nationally known in the promotion of gas water heaters. He will serve as special representative of the Payne organization which manufactures gas heating equipment.

CONVENTION CALENDAR

FEBRUARY

Feb. 7 **A. G. A. Mid-West Industrial Gas Sales Council**
Palmer House, Chicago, Ill.

10-12 **Southern Gas Association and Southern-Southwestern Regional Gas Sales Conference**
Hotel Adolphus, Dallas, Texas.

12-14 **American Management Association—Personnel Conference**
Palmer House, Chicago, Ill.

17-18 **A. G. A. Mid-West Regional Gas Sales Conference**
Edgewater Beach Hotel, Chicago, Ill.

MARCH

Mar. 6-7 **Pacific Coast Gas Association Spring Sales Conference**
Los Angeles, Calif.

13-14 **A. G. A. Industrial Gas Sales Conference**
Lord Baltimore Hotel, Baltimore, Md.

17-18 **Oklahoma Utilities Association**
Tulsa, Okla.

27-28 **New England Gas Association**
Hotel Statler, Boston, Mass.

27-28 **Pacific Coast Gas Association Spring Technical Conference**
Los Angeles, Calif.

APRIL

Apr. 1-3 **American Society of Mechanical Engineers, Spring Meeting**
Atlanta, Ga.

7-8 **Joint Accounting Conference A. G. A.-E. E. I.**
Cincinnati, Ohio.

14-16 **Mid-West Gas Association**
Hotel Nicollet, Minneapolis, Minn.

15-17 **Southwestern Gas Measurement Short Course, College of Engineering**
University of Oklahoma, Norman, Okla.

21-22 **Gas Meters Association of Florida and South Georgia**
Hollywood, Fla.

21-23 **A. G. A. Distribution Conference**
Pittsburgh, Pa.

23-25 **Missouri Association of Public Utilities**
Elms Hotel, Excelsior Springs, Mo.

24-25 **A. G. A. Hotel, Restaurant and Commercial Sales Conference**
Palmer House, Chicago, Ill.

29-May 1 **U. S. Chamber of Commerce**
Washington, D. C.

MAY

May 5-8 **A. G. A. Natural Gas Section Convention**
Adolphus and Baker Hotels, Dallas, Texas.

8-9 **National Metal Trades Association**
Palmer House, Chicago, Ill.

12-14 **Pennsylvania Gas Association**
Skytop, Pa.

19-21 **A. G. A. Production and Chemical Conference**
New York, N. Y.

20-21 **Canadian Gas Association**
Royal Connaught Hotel, Hamilton, Ontario.

22-23 **Natural Gas and Petroleum Association of Canada**
Hamilton, Ontario.

JUNE

June 2-5 **Edison Electric Institute**
Buffalo, New York.

3-5 **Association of Gas Appliance & Equipment Manufacturers**
Ambassador Hotel, Los Angeles, Calif.

SEPTEMBER

Sept. 8-10 **Mid-West Gas School and Conference**
Ames, Iowa.

11-12 **Empire State Gas and Electric Association**
Saranac Inn, N. Y.

OCTOBER

week of 20 **A. G. A. Annual Convention and A.G.A.E.M. Appliance and Equipment Exhibition**
Atlantic City, N. J.

Accounting SECTION

E. N. KELLER, *Chairman*
LYMAN L. DYER, *Vice-Chairman*
O. W. BREWER, *Secretary*

How to Get the Most Service from Flashlight Batteries

By G. W. FUCHS

Philadelphia Electric Company, Philadelphia, Pa.

THIS article deals primarily with the industrial type of dry flashlight cells used for meter reading purposes.

Cell Construction

The dry flashlight cell commonly called the dry battery is a zinc can filled with an electrolyte consisting largely of sal ammoniac and manganese through which a carbon rod is mounted in the center of the cell, making no direct contact with the zinc can. The accompanying diagram shows the important features in the design of a cell. The metal top cell shown contains more electrolyte than the wax top cell of the same size because the metal seal or cover is much thinner than the wax seal. The larger quantity of electrolyte is extremely desirable because more service can be obtained from such cells.

The metal sealing cap is so constructed as to provide no electrical path from the carbon rod to the zinc container. The electric current is produced by the action of the electrolyte on the zinc and consumes the zinc container. In general, the rate of consumption is dependent on the amount of current which is permitted to flow from the capped carbon electrode or center post through the bulb to the zinc container. This container is constantly being consumed, although at a very reduced rate when the cell is not in use. In its exhausted condition, the zinc container is badly deteriorated and should be discarded immediately to avoid damage to the flashlight case. There is no way of recharging these cells. The cardboard carton around the cell is required to insulate the cell from the side of the metal flashlight case.

The so-called commercial cells which can be purchased in any hardward or Five and Ten Cent Store are manufactured to give long shelf life with infrequent and short periods of use. They contain a relatively dry electrolyte of less active ingredients and for that reason the rate of consumption when the cells are not in use is extremely low.

The industrial type of cell contains a moist or even wet electrolyte of more active ingredients which, in turn, causes more rapid consumption when not in use. Therefore, to get maximum efficiency, this type of cell should be used within four months after the date of manufacture. Such cells, however, have the economy and advantage of allowing long periods of sustained usage with short recovery periods. A pair of good industrial cells of standard "D" size, approximately 2-5/16" x 1-5/16" can give highly satisfactory illumination to a 2.6 volt 300 milliampere bulb for over 800 minutes, while a commercial cell of the same size will light such a bulb for approximately 400 minutes when both sets of cells are tested over the standard meter reading duty cycle.

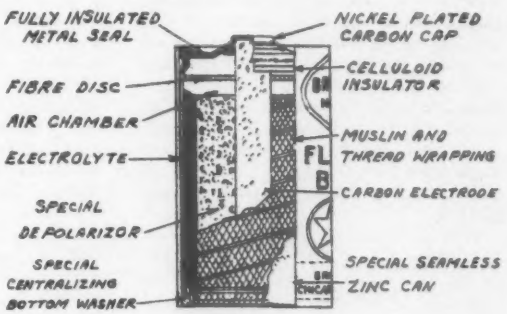
General Suggestions for Economy

There are many popular impressions concerning economy in the use of flashlight cells which tests show to be of little value and even fallacious:

1. The condition of a cell cannot be ascertained by a simple volt meter or ammeter test. All used cells make rapid recovery after a period of rest. Cells which have rested over night may give an excellent light on the succeeding morning and also show good open circuit volt meter and short circuit ammeter tests, but may be incapable of serving a meter reader for the duration of the day with satisfactory light. A better method of control is described later on in this article. If a quick method is required which will give a better indication of the condition of the battery than the simple ammeter or volt meter test, it is suggested that the light be turned on, observing its brilliancy and after permitting it to burn for a minute or two, again observe the brilliancy. A marked decrease in brilliancy is a positive indication that the cells are weak.

2. Some supervisors permit the replacement of only one cell at a time. While the number of useful burning minutes may be little affected by such an operation, it is evident that their meter readers never enjoy a really good light, and leaky cells can result. Good light is essential to obtain accurate results and reduce the number of accidents. The best lighting and, therefore, the greatest overall economy is obtained by using a battery of new cells until the light reaches the unsatisfactory point, when the entire battery should be discarded and replaced by a new set of cells.

3. There is no inherent economy in the use of three-cell flashlights. When 0.3 ampere (300 milliampere) bulbs are used, a three-cell battery costs 50% more than a corresponding two-cell battery because both batteries will operate for approximately the same number of minutes. The intensity of the light derived from the three-cell battery is better than that obtained from the conventional two-cell battery, but only to a limited extent and, under the vast majority of meter reading conditions, is not worth the added expense. In fact, the new fixed focus (sometimes called "prefocused") flashlight cases designed for two-standard cells give an equal if not a more uniform spot light than the conventional three-cell flashlight cases. Excellent general illumination is also obtained from the prefocused light.



Industrial unit cell

A good concentrated spot light can only be obtained from a conventional (not prefocused) flashlight by painstakingly selecting a bulb which has a filament in the exact center of the reflector. When the filament is not in the center, a series of concentric circles of somewhat intense lighting results. In the face of these facts, it is difficult to justify the use of the long unwieldy and heavy three-cell flashlights.

4. Much confusion persists concerning

long shelf life and long burning time. The average meter reader feels both conditions occur in the same cell. As stated previously, the industrial type of cell which has a relatively shorter shelf life than a commercial cell can deliver from 50% to 100% more energy than the corresponding commercial cell when tested over the same duty cycle.

The industrial type of cell if retained in stock for too long a period will show signs of corrosion, sweating, and even actual leakage. In new cells, these conditions only arise well beyond the expiration date indicated on the cartons but, in exhausted cells, will appear within a few days after the useful life has been extracted from the cell. As stated previously, leaking or exhausted cells should be discarded immediately.

Cell Deterioration

5. The date placed on the cardboard casing of flashlight cells does not mean that a cell used prior to that date will give much greater service than one used immediately after that date. As a matter of fact, a cell, like an egg, begins to deteriorate as soon as it is made. If everyone understood the perishable nature of an electric cell, perhaps only the date of manufacture should be printed on the casing with a statement that the cell is to be used as soon as possible. The public, however, is so accustomed to seeing an expiration date on a perishable article that the battery company which might show the date of manufacture could find itself at a serious disadvantage competitively.

Tests of industrial cells indicate that approximately 5% of the useful life is lost during each month of storage. The latter is affected considerably by temperature and atmospheric conditions.

Because it is customary for most manufacturers to fix an expiration date of three or four months after the date of manufacture, many companies place an order every three months for the succeeding three months' supply. Obviously, this is poor economy. A better plan is to place one order each month for industrial cells with shipments scheduled at semi-monthly intervals. Where such a plan is pursued the storeroom handling the cells must be cautioned to issue the old stock before the new ones are released for use. If the carry-over stock is large, subsequent orders should be decreased accordingly. The same care which is demanded of the storeroom must also be required of the local forces in issuing cells to meter readers.

6. A continuous burning test of flashlight cells without periods of rest is inconclusive and worthless, even when such tests are supplemented by the test of brilliancy on a photometer. The most accurate way of testing must recognize the duty cycle to which the cells are subjected because the period of rest plays an extremely important part in the useful life to be obtained.

* * * *

Many of the foregoing economies can only be realized if the manufacturer of flashlight cells is informed concerning his customers' requirements and if a system is established for the routine testing of each new shipment of cells. One company made a very complete survey of the extent to which flashlight cells are used by its meter readers. The duty cycle, on an average, was found to be equivalent to one minute of use followed by approximately two minutes of rest, taking into consideration apartment houses, ordinary residences, and outlying locations where greater distances are involved between meter stops.

METER READING

Life Test of Industrial Flashlight Batteries

P. E. Co. Purchase Order No. 81590 — Batteries Received 8/8/40
P. E. Co. Requisition No. AL. 9798 — Batteries Dated Dec. 1940

	Volts 8:30 A.M.			*Volts* 12 Noon			*Volts* 12:30 P.M.			*Volts* 5:00 P.M.		
Date	*Off*	*On*	*Milli-Amps*	*Off*	*On*	*Milli-Amps*	*Off*	*On*	*Milli-Amps*	*Off*	*On*	*Milli-Amps*
Tues.	3.4	3.3	300	2.7	2.5	300	2.8	2.6	300	2.6	2.4	290
Wed.	2.9	2.7	300	2.6	2.4	280	2.7	2.4	290	2.5	2.3	280
Thurs.	2.9	2.6	300	2.6	2.3	280	2.7	2.4	280	2.4	2.1	270
Fri.	2.8	2.5	290	2.4	2.1	270	2.6	2.2	280	2.4	2.0	260
Sat.	2.7	2.3	280	2.4	2.0	260						
Mon.	2.8	2.3	280	2.4	1.9	260	2.5	2.0	260	2.3	1.8*	250
										850 Burning Minutes		
Tues.	3.3	3.1	330	2.7	2.5	300	2.8	2.6	300	2.6	2.4	290
Wed.	2.9	2.7	300	2.6	2.3	280	2.7	2.4	290	2.5	2.3	280
Thurs.	2.9	2.6	300	2.6	2.3	280	2.7	2.4	280	2.4	2.1	270
Fri.	2.8	2.5	290	2.4	2.1	270	2.6	2.2	280	2.4	2.0	260
Sat.	2.7	2.3	280	2.4	2.0	260						
Mon.	2.8	2.3	280	2.4	1.9	260	2.5	2.0	260	2.4	1.8†	250
										830 Burning Minutes		

* Time 4:00 P.M.
† Time 3:00 P.M.

Flashlight Cell Specifications

As a result of the survey, the following specifications were prepared for use by that company's purchasing department and for the guidance of the manufacturer:

1. GENERAL

The flashlight cells shall have a non-spillable electrolyte.

The completed cell shall measure within the following over-all limits:

Height 2-5/16" and 2-13/32"
Diameter 1-9/32" and 1-11/32"

The top of the cell shall be closed by means of a metal or composition seal or cover insulated from both electrodes, provided that such covers or seals do not adversely affect the useful life of the battery or the flashlight case in which the cells are used. The cells shall be inclosed in a close-fitting insulating jacket, the outside of which shall be marked with the following information:

Trade name of cell, name of manufacturer or supplier, or such trade-mark as will identify him.

Number or other designation of size.

The expiration date of the guaranty period, or date of manufacture, either to be properly identified. (This may be shown on zinc container if plainly visible and does not adversely affect the useful life of the cell.)

The metal cap on the carbon rod and the zinc bottom serve as the terminals and shall be clean to insure good electrical contact.

The material and workmanship shall be first class in every particular and cells which have any of the following defects shall be considered as not complying with this part of the specification:

Loose terminals
High or low carbons
Corroded caps on carbon rods
Carbon rods off center
Loose or cracked seals
Leaking or distorted zinc containers

2. TESTING OF BATTERIES

Voltage Tests

The open circuit voltage per cell shall be not less than 1.50 volts per cell with a voltmeter having a resistance of not less than 300 ohms per volt and having not less than 50 divisions of its scale per volt.

Capacity Tests (Intermittent Discharge)

Intended to show the useful life of batteries when used for meter reading by the company. This test to be started within 30 days of receipt by company from manufacturer.

Batteries in sets of two in series shall be discharged through an 8.7 ohm coil or a flashlight bulb similar to type used in service. (At present 2.6 V; 300 milliampere pre-focused.)

The test shall be conducted in a room maintained at 70 degrees F. and shall oper-

ate over a duty cycle of one minute discharge followed by two minutes of rest. This cycle is to be operative for 3½ hours followed by 30 minutes of non-use, with a succeeding period of 4½ hours during which the latter duty cycle is to be resumed followed by a non-use period of 15½ hours.

The initial open circuit voltage shall be taken. Closed circuit voltage readings shall be taken at start of each day and at the end of each period. Tests will continue until closed circuit voltage falls below 1.80 volts per set of two cells. Service life of batteries shall be the total actual discharge time for the voltage to fall to 1.80 volts per set of two cells.

Batteries shall have not less than 800 minutes actual discharge time.

Obligation of Manufacturer

Where a shipment is found to fall below the required standard as outlined above, the manufacturer shall adjust the shipment by replacements; or by additional batteries so that the average actual discharge time per battery of this shipment shall then meet the above standards.

* * * *

This type of control has been in effect for three years and only in two instances did the manufacturer fail to fully meet the above specifications. In both cases, restitution was made without question. Complaints from meter readers concerning poor cells are now practically unheard of.

From the information compiled in the field, together with a control on purchases, it is not difficult to predict the minimum number of days of service which can be obtained from a battery in a given area.

In order to insure the greatest efficiency, a record must be maintained of cells and flashlight bulbs issued to each meter reader.

Flashlight Cell Testing Device

These devices, considering the control which can be maintained to insure the economical purchase of a uniformly good product, are inexpensive.

The mechanism consists of an electric clock geared to a switch and so timed that the flashlight bulb is lighted for one minute by the cells undergoing test, followed by two minutes of rest. Two sets of cells can be tested simultaneously. The duration of the non-use periods is controlled manually by extracting and inserting the cord of the control mechanism into an ordinary convenience outlet. The readings of the ammeters and volt-meters can be obtained by merely pressing buttons provided for the purpose.

The entire device weighs only a few pounds and is mounted in a small case, 8" x 12" x 16". The work of testing is so simple that it can be performed by an average office boy with ease, and without interference with his regular duties. A sample form filled in with test results is shown. Any reputable flashlight cell manufacturer will recommend the installation of such a test device because it permits the purchaser to obtain a highly satisfactory product and relieves the manufacturer of unjustifiable complaints.

The complaints received from meter readers concerning the condition of cells are sometimes based on prejudices and it is practically impossible to demand restitution of a manufacturer for inferior equipment when the adjustment must be predicated on judgment.

Sampling New Shipments of Flashlight Cells

In those companies where thousands of cells are purchased each month, it is customary to make a simple ammeter test of three or four cells in each carton, selecting two cells of the entire shipment which show the lowest ammeter test or poorest physical condition, and two cells which show the highest ammeter test. The two sets of cells so chosen should be placed into the testing device as quickly as possible after they are received. The average burning minutes derived from both sets of cells must meet the specifications. If one set of cells shows an unusually poor test, in fairness to the manufacturer, another set of cells should be selected and subjected to test. The three sets of cells must then be considered in developing the average burning time.

Local Office Testing

In the meter reading headquarter or local office, the most satisfactory method of ascertaining the condition of a battery is to test the voltage of the battery under load. Such a testing device can be made of a piece of

(Continued on page 80)

Order Defines "Original Cost" of Natural Gas Leaseholds

By JAMES COMERFORD

Chairman, Natural Gas Committee On Classification of Accounts

FROM the inception of the new uniform systems of accounts natural gas producing companies have been seeking equitable relief from application of the inflexible definition of "Original Cost" to the unique character of land and land rights acquired for the production of natural gas.

It is of considerable importance and interest, therefore, to find that the Public Service Commission of West Virginia, in an order titled General Order No. 107-D, dated November 29, 1940, amended its definition to provide for the determination of original cost of natural gas leaseholds as the first cost to the accounting utility, or to an affiliated utility. The applicable portion of the order reads, as follows:

"And upon consideration of the foregoing and the record in this proceeding, it is ordered that the Uniform System of Accounts for Gas Utilities promulgated by order entered herein on January 4, 1939, being General Order No. 107-C, be amended as follows:

"27. 'Original Cost' (Definitions page 5) as applied to utility plant means the cost of such property to the person first devoting it to public service, except that in the case of land and land rights acquired from other than associated companies for the production of natural gas 'Original Cost' shall be the first cost of acquisition to the accounting utility, unless otherwise ordered by the Commission. When any land and land rights for the production of natural gas, whether as an operating unit or not, are acquired from associate companies 'Original Cost' shall be the first cost to the first associate, unless otherwise ordered by the Commission.

"Account 510 Delay Rentals (Income Accounts, page 109). Delete all of Account 510 and substitute in lieu thereof the following:

"Account 510 Delay Rentals and Renewals

510-1 Delay Rentals.

A. This account shall be charged with the amount of rents paid periodically on natural gas lands in order to hold natural gas lands and land rights for the purpose of obtaining a supply of gas in the future.

B. Include also in this account the cost of obtaining natural gas leases for a period of one year or less.

C. Records supporting this account shall be so kept that the utility can furnish complete details of the charges made for each natural gas leasehold. (See note to Utility Plant Instruction 9-1.)

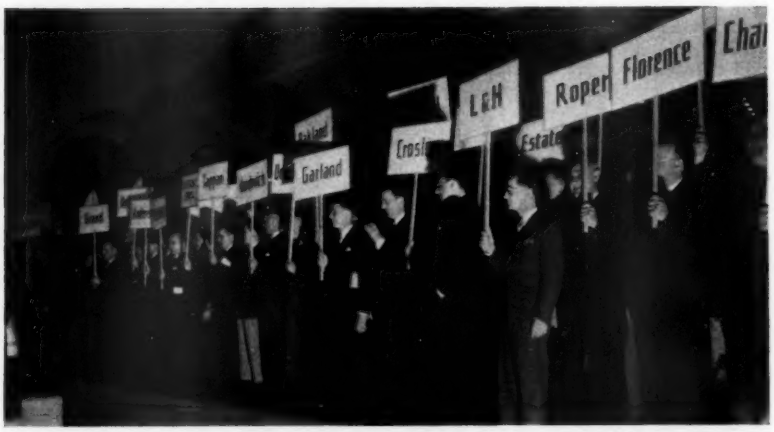
510-2 Renewals.

A. This account shall be charged with the amount paid lessors for renewing and extending leaseholds where there has been no interruption in the company's title to the lease or in rental payments.

B. Records supporting this account shall be so kept that the utility can furnish complete details of the charges made for each natural gas leasehold. (See note to Utility Plant Instruction 9-1.)"

This order clearly recognizes that the theory of original cost could not with justice be applied to land and land rights acquired for the production of natural gas because of economic changes which take place during the development of gas territory. While the order will permit utilities operating in West Virginia to account for investment in leaseholds on a "Cost to the Utility" basis instead of on an "Original Cost" basis, it is also generally helpful in defining the cost of leaseholds and giving the proper accounting for renewal costs.

Pittsburgh Dealers Sell 4449 Modern Gas Ranges in Single Month



Climax of the Pittsburgh Gas Range Rally, was a "Profit Parade" participated in by Pittsburgh representatives of gas range manufacturers. Pictured above are the manufacturers' representatives receiving the plaudits of the crowd after having marched through the hall led by a brass band

THE latest news from Pittsburgh is that the Certified Performance program has definitely taken hold and been accepted both by dealers and the public.

During last October the Natural Gas Companies Serving the Greater Pittsburgh Area, (namely, the Equitable Gas Company, The Peoples Natural Gas Company and The Manufacturers Light & Heat Company) undertook their first dealer CP promotion. The Gas Appliance Promotion Division of Ketchum, MacLeod & Grove, Inc., which represents the Pittsburgh gas companies in their dealer relations work, conducted this activity. 4449 modern gas ranges, of which 460 were CP models, were sold during the month by the 514 cooperating dealers in 110 towns in the Greater Pittsburgh Area.

Complete sets of window display material, based on the timely election theme, were furnished to cooperating dealers. In addition, various display cards, highlighting the features of CP ranges, were also provided.

A consumer contest was conducted in which entrants were instructed to complete, in 50 words or less, the statement "In selecting the perfect cooking appliance the Modern CP Gas Range gets my vote because—." Dealer store traffic was built by requiring entrants to secure their entry blanks at independent dealers' stores. Completed blanks were then returned either to the dealers who provided them or were sent directly to the Gas Appliance Promotion Division.

The prizes in this contest were 10 CP ranges contributed by the manufacturers. The prize CP ranges were Crosley, Detroit Jewel, Estate, Florence, Magic Chef, Norge, Quality, Roper, Tappan and Universal. In order to obtain even greater interest in the contest, each entrant was presented with the new A. G. A. cook book "Food and Health Cookery with the CP Gas Range." These cook books, which were furnished to dealers at no cost by the Gas Appliance Promotion Division, were given to entrants by dealers when completed entries were turned in. To encourage sales activity on the part of individual salesmen, seventeen-jewel wrist watches were given to the 10 retail salesmen in the Greater Pittsburgh area who sold the greatest number of CP ranges during the October campaign. More than 1,500 retail salesmen were eligible for the contest.

Merchandise Incentive

As an added incentive to the public to buy CP ranges, the Gas Appliance Promotion Division furnished a 13-piece glass ovenware set to each person who pur-

Each dealer in the Pittsburgh area was supplied with a complete set of window display material to be used in conjunction with the campaign. Here is a model window display illustrating the various items included in the dealer display kit

chased a CP range during October. This premium was supplied at no charge to the dealers and served to stimulate CP activity.

A novel feature of the campaign was the "CP Shopper" who called at dealers' stores without revealing her identity and gave $1 to each salesman who, in her opinion, presented an adequate CP gas range sales story. This part of the promotion was designed to keep dealers and their salesmen on their toes during the promotion.

The entire campaign was backed by a heavy advertising schedule in the Pittsburgh papers. All ads featured the Certified Performance ranges, the consumer contest, and the CP ovenware premium. Three ad insertions listed all dealers cooperating in the program. Dealers were encouraged to tie-in with CP ads in their local papers. To further stimulate dealer advertising the Gas Appliance Promotion Division prepared a broadside which was sold to dealers at production cost. These broadsides, of which 339,000 were bought by dealers, not only featured the promotional elements of the campaign but also, through an arrangement with participating manufacturers, devoted a page to the specific line of ranges carried by the individual dealer.

The program was presented to interested manufacturers and retailers through a series of meetings. The first meeting was held for manufacturers' representatives and distributors six weeks prior to the opening of the campaign and these individuals were urged to promote interest among their dealers. A month prior to the opening, a meeting was held for department store executives who were informed of the details of the program in order that they could have adequate time for preparation.

Large Dealer Meeting

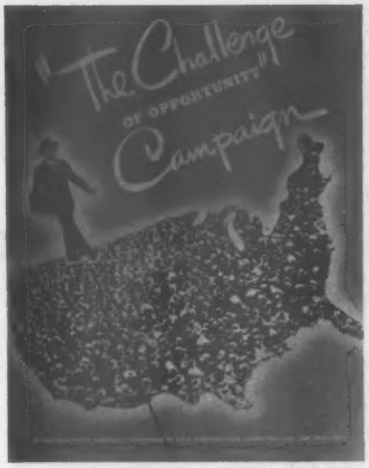
During the last week in September a large dealer meeting was held at a Pittsburgh hotel. The affair was attended by over 850 people most of whom were dealers, retail salesmen and their wives. The group was greeted by C. E. Bennett, president of The Manufacturers Light & Heat Company, on behalf of the Natural Gas Companies Serving the Greater Pittsburgh area. National aspects of the Certified Performance Program were presented by H. A. Watson of the A.G.A.E.M. Harriet Rodenbaugh, of the home service department of the Equitable Gas Company, and Flora Dowler, home service director of The Manufacturers Light & Heat Company, presented a skit which emphasized the features of the CP gas range. The details of the October Campaign were then explained by representatives of the Gas Appliance Promotion Division. The climax of the meeting was a "Profit Parade" which was staged by the Pittsburgh sales representatives of the various gas range manufacturers. A buffet supper was served and music was provided for dancing.

Essential to the success of the campaign was the personal contact work with each individual dealer by the field representative staff of the Gas Appliance Promotion Division. All display material was personally delivered and each participating dealer was given a detailed explanation of the various elements of the campaign. During the October promotion period, field representatives made follow-up calls to encourage dealers to tie-in actively with the campaign and to offer any assistance possible. At the close of the campaign, field representatives secured individual reports from participating dealers. These reports covered total sales, CP sales, dollar volume, average unit price, use of display material and advertising.

The enthusiasm of the dealers is indicated by the fact that during the October campaign 366 of them installed window displays. Two hundred fifty-three dealers used newspaper, radio, billboard or direct mail advertising at their own expense. One hundred ninety-two dealers displayed CP ranges on their floors as compared with eight dealers who had been stocking CP ranges prior to the October activity.

The individual dealer reports indicate that the independent dealers sold 4,449 ranges during the month. The average gross price of ranges sold was $95.15 as compared with an average gross price of $88.30 during the April campaign of the Gas Appliance Promotion Division. It is believed that the CP emphasis was responsible for the increased average price because 460 CP ranges, or 10.4% of the total, were sold at an average price of $119.02.

One interesting result of the campaign was the indication of the dominant part which appliance dealers can play in the merchandising of highest quality gas ranges. The appliance group was second in total volume and first in average unit price with an overall gross average of $115.18, twenty dollars higher than the general average. Of the total number of ranges sold by the appliance group, 28.7% were CP models, 18.3% higher than the general average.



Cover of the portfolio describing the second quarter activity of the A. G. A. Refrigeration Committee campaign

Furniture stores sold the greatest number of units but were lowest in average price. Department stores were third in both sales volume and average price. Hardware stores were fourth in sales volume but second in average price. Utilities and chain stores were not included in this survey.

It is the plan of the Pittsburgh group to continue the gains made by conducting an intensive Certified Performance advertising and promotional program during 1941. The manufacturers report that Certified Performance sales have continued to hold up since the campaign which indicates that CP ranges have won the support of both dealers and the consuming public. The whole activity is in line with the major objective of the Gas Appliance Promotion Division which is to promote the sale of better quality gas appliances through independent retail outlets.

Strong Mid-West Gas Sales Program Arranged for Chicago, Feb. 17-18

T. J. Strickler

THE 1941 Mid-West Regional Gas Sales Conference is being planned as a veritable extravaganza from the stand-point of program design and entertaining relaxation for visitors. It will be held February 17 and 18 at Edgewater Beach Hotel, Chicago, Ill., under the sponsorship of the Residential Section of the American Gas Association.

Under the direction of Elliott G. Peabody, this year's conference chairman, a two-day program has been arranged which will have a broad general interest and not a dull moment.

Each session will be opened with a nationally known speaker and will close with an interesting skit.

On Monday morning, Feb. 17, Clifton Utley, well-known commentator and radio personality, will discuss American business and trade in relation to what is happening abroad. His subject will be, "Crystal Gazing at American Industry." On that same first morning, T. J. Strickler, vice-president and general manager of the Kansas City Gas Company, and this year's president of the American Gas Association, will greet the audience with some pointed paragraphs on

our industry's progress. The morning will close with "Fun in the Kitchen," a sound movie in technicolor which has been favorably received by many gas companies.

On the first afternoon program James Watson, personnel director of Montgomery Ward & Co., will open the session with the fascinating subject, "Debunking Salesmanship," and will provide several new interpretations of the requirements for modern salesmanship. Following this presentation, R. J. Rutherford, vice-president of the Worcester Gas Light Co. and Chairman of the Residential Section of the American Gas Association, will speak on "New Gas Equipment and its Marketing Possibilities."

Don Alford, of the Citizens Gas and Coke Utility, will give a presentation on "New Concepts in Space Heating." The first day will close with a refrigeration presentation by B. T. Franck, vice-president, Milwaukee Gas Light Company, and chairman of the Refrigeration Committee.

On the second morning, Carlyle Embree, the nationally known sales consultant, will speak on the intriguing subject, "High Hats and Brown Derbies in the Gas Industry." This talk is followed by a straight-from-the-shoulder talk on, "Why Don't You Sell More Gas?," presented by Edwin Bennard, vice-president of the Middle West Service Corporation. Mr. Bennard will be followed by Roscoe Rau, secretary of the National Retail Furniture Association, who will paint a picture of the present appliance dealers' needs from the gas utility companies. The morning will close with another sound movie on a specific phase of modern salesmanship.

The second afternoon opens with a scintillating and highly humorous but at the same time pointed address by Harold Van Orman, president of the Van Orman Hotels, and a devout sponsor of gas as a fuel. Following Mr. Van Orman, Morgan L. Fitch, president of the Chicago Real Estate Board, will speak on a topic pertaining to the requirements of modern home owners.

G. M. Rohde, Jr., of the Ruud Manufacturing Company, who will also appear on the program on Tuesday afternoon, will cover "Hot Water and Health." The program will close with a fast moving skit entitled, "Ranging Through the Years." The skit concludes with a presentation of Certified Performance features, in which John Bogan of the A. G. A. E. M. and Albertine Berry, chairman of the Home Service Committee, American Gas Association, will take part.

The Home Service breakfast will take place at 8:30 A.M. on Tuesday morning, February 18. Patricia Daugherty, Woman's Editor, *Chicago Herald* and *American*, will be the guest speaker at the presentation of a skit, "Miss Muffet Takes the Cake" which will be given at the same time.

To provide a maximum of opportunity for sociability a dinner and entertainment has been arranged for Monday night, February 17. The entire Marine Ballroom of the Edgewater Beach Hotel will be made available for conference guests.

Southern Gas Convention and Sales Conference

THE annual convention of the Southern Gas Association and the 1941 Southern-Southwestern Regional Gas Sales Conference will be held on Monday, Tuesday and Wednesday, February 10-12 at the Adolphus Hotel, Dallas, Texas.

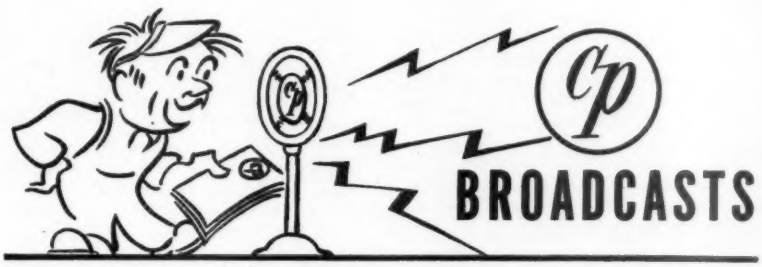
Featured on the residential sales program which is sponsored jointly with the Residential Section of the American Gas Association, will be an address on Public Relations by J. Burr Gibbons of Tulsa, an outstanding authority on this subject. H. S. Watson, field counsellor of the Association of Gas Appliance and Equipment Manufacturers will discuss CP Range Program. J. R. Guidroz will collaborate with Mr. Watson in discussing the program from a local standpoint.

J. W. Lea, of the Atlanta Gas Light Company, will deliver an address entitled "House Heating—Win, Lose or Draw" and Carl Dean, of the Oklahoma Natural Gas Company, Tulsa, Oklahoma will discuss this subject from the dealer angle.

Tuesday's sales program will feature a Refrigeration Symposium with Seward Abbott, H. M. Wickman and R. L. Weinman. An address by Jack Knighton, of Servel, Inc., on Air Conditioning and a talk on Water Heating by J. H. Warden, of the Oklahoma Natural Gas Company of Tulsa, will round out an interesting program. The conference will close with an address on House Heating by Lyle Harvey of the Bryant Heater Company.

Both of the conference meetings will be held under the Chairmanship of C. L. Osterberger, Louisiana Power and Light Company, New Orleans, La.

In addition to the sales conference programs, the convention will include general sessions, home service, industrial and technical sessions. Featured on the general sessions' program will be addresses by D. A. Hulcy, president of the Lone Star Gas Company, Major T. J. Strickler, president of the American Gas Association, and Frank C. Smith, president of the Houston Natural Gas Company.



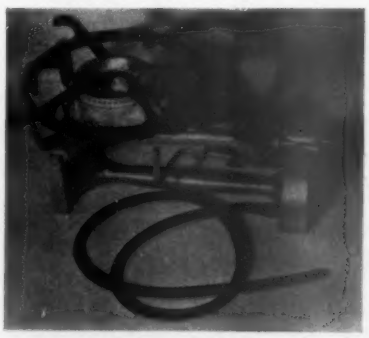
How We Sell 60% CP Gas Ranges

By C. K. PATTON, *New Business Manager, Dallas Gas Company*

TO us the sale and promotion of CP Ranges offers the kind of vehicle that is ideally suited for the place that the utility company should play in its efforts to develop greater public acceptance for modern gas ranges. As a matter of fact, we are not interested in selling just any kind of ranges, but we are concerned in the development of our business and try to lead the way in our community in the introduction of the better class of gas burning appliances, whether it be gas ranges, gas water heaters or gas heating equipment. That is why we "blaze the trail with CP."

A big help in recent promotion has been the use of a small portable burner which each salesman carries with him in his territory. This burner has a klixon valve and includes the "simmer save" burner. The burner is equipped with a small rubber hose whereby the burner from the customer's old stove can be removed and the new type burner attached to the valve. With the use of this the salesman can show how the burner functions and, if necessary, can cook a pan of spinach or perform any function that will demonstrate its value. The percentage of sales that result from these demonstrations is exceptionally high.

We will wind up 1940 with better than 60% CP Range sales, and I hope that 1941 will show some improvement over this figure.



Portable burner for salesman's use

CP Audio-Training Boosts Sales

AFTER salesmen of the Roanoke Gas Company, Roanoke, Va., had completed the CP Audio-Training course under the direction of H. A. Watson, of the A.G.A.E.M., E. V. Bowyer, commercial manager of the Roanoke company, wrote as follows to George L. Scofield, chairman of the A. G. A. Domestic Range Committee:

"It gives us much pleasure to commend this course for all utility salesmen and we believe we should go a step farther in recommending it to all employees throughout the organization. The success which we enjoyed in Roanoke was due entirely to the splendid manner in which Mr. Watson worked with the men in improving their story and recording it for each individual.

"We were pleased to note that during the week of the training course our sales showed a nice increase over the previous week and sales for the week following were the largest enjoyed in our company for a comparable period.

"CP sales continue to show an improvement and we believe the time will come when most well trained salesmen, as a result of the CP audio-training course, will sell only CP ranges."

Old Range Round-up Spurs CP Sales

MORE than 50,000 enthusiastic persons witnessed a Wild West Parade which was the opening gun of the annual Old Range Round-Up recently completed at Grand Rapids, Michigan, under the sponsorship of the Michigan Consolidated Gas Company.

Backed by a special six-page advertising section in the Sunday newspaper, radio broadcasts and other advertising media, special prize awards and entertainment features, the five-week campaign was especially designed to meet a sales quota of 1,200 gas ranges.

In addition to those actively participating in the program which included downtown department stores and dealers in the surrounding territory served by the gas company, other local merchants shared in a general stimulation of business generated by the occasion. Because of this fact and the novel features provided, this affair has become extremely popular not only with the merchants of the city, but by the entire community who look forward to it from year to year.

The civic interest in the event and its importance to the community may be judged from the fact that Mayor George W. Welsh led the parade accompanied by Wallace M. Chamberlain, sales manager of the gas company. Many colorful and unusual floats were in the line of march in addition to bands, cowboys, and a special National Defense Division including American Legion Posts which contributed to the gaiety of the occasion. A special float was used by chefs from four prominent local hotels from which they gave food demonstrations.

Indians from the Taos Reservation in New Mexico in full tribal regalia added color and entertainment to the Grand Rapids Old Range Round-up and Wild West Parade

A unique feature of the parade was the presence of a group of seven Indians from the Taos Reservation in New Mexico, who marched in full tribal regalia and caused much comment from the crowds. These Indians entertained by doing a tribal dance and appeared at local schools, luncheon clubs, public institutions in addition to making broadcasts over a local radio station.

When the sales figures were compiled at the close of the five-week campaign, it was found that the dealers had sold 627 gas ranges and the company 564, a total of 1191 ranges. During the same period, 137 refrigerators and 161 automatic water heaters also were sold. Of the 564 ranges sold by the company, 346, or 61%, were Certified Performance ranges. The average selling price of ranges sold by the company was $110.25 gross and $99.23 net, a 10% allowance having been made on old ranges traded in. The average net selling price of ranges sold by dealers was $82.02.

Registrations in A.G.A. Refrigeration Campaign Reach New High

REGISTRATIONS in the 1940-41 American Gas Association Refrigeration Committee campaign having reached a new high, competition in the various company and salesmen classifications becomes even more spirited as the contest enters its second quarter period. Bearing the theme, "The Challenge of Opportunity," the sales drive for the January-February-March period keynotes the challenge of the New Year and the opportunities for greater profits through gas refrigerator sales.

Bernard T. Franck, chairman of the A. G. A. Refrigeration Committee, has reported a substantial increase in the number of companies and salesmen participating in the current campaign as compared to registration figures for the similar period last year. Coincidentally, Mr. Franck announced that nine new classifications of competition were added to the campaign, making a total of 35 classifications in six divisions in which companies can compete for awards. These changes are retroactive to include all four quarterly campaigns. The new classifications, the committee chairman said, are subsections for greatest total installations in four of the campaign's six divisions with Division I and Division VI remaining unchanged.

A comprehensive portfolio outlining features of the second-quarter A. G. A. refrigeration campaign, which has been distributed to gas company executives throughout the country, points out that this period is divided into three monthly contests. The theme for the current—January—monthly contest is "Prospect for Profits" with gas refrigeration. February will be designated as "Break Your Record" month, while the March theme will be "Work and Win."

According to the portfolio, salesmen will compete for monthly and quarterly awards and their sales will count toward the six grand annual awards to be presented to the high salesman in each division at the end of the twelve months.

Temporary possession of the Servel Annual Best Performance Trophy will be given to companies leading in each of the 35 campaign classifications at the end of each quarter period as attestment of their sales achievement. These companies' quarterly performance will count toward year-'round honors that will include permanent possession of the trophy.

To Increase, Interpret and Investigate Industrial and Commercial Gas Business

By Eugene D. Milener

Secretary, Industrial and Commercial Gas Section

TO increase the industrial and commercial gas load, to interpret that load to the industry, and to investigate better ways of serving and selling non-residential business, the Industrial and Commercial Gas Section of the American Gas Association, through its committees' conferences, has mapped out a work-schedule for 1941 designed to keep pace with national business conditions which are shifting and changing more rapidly than ever before. Defense, of course, is the keynote of today's business world. But there are normal trends and normal markets which must not be slighted in the welter of war worries. The lusty infant, commercial refrigeration by gas, for example, needs cooperative study and development, Hitler or no Hitler. This year the Section will not "go out on a limb" by forgetting that someday there will be an armistice, however important the matter of arms and armies may become.

H. Carl Wolf

Under the chairmanship of H. Carl Wolf, President, Atlanta Gas Light Company, and in line with policies set down by its managing committee, the Section will make its contributions for 1941 through one general horizontal committee; seven vertical committees covering special fields of interest; two national sales conferences; non-residential sessions in connection with two national conventions; participation in three national trade and industrial expositions; and sustained promotional activity in the form of publicity and advertising. The following notes sketch only in skeleton the work the Section will tackle. Much, of course, arises during the year which could never have been anticipated or included in any prospectus.

FOOD SERVICE EQUIPMENT COMMITTEE—Lester A. Dubberke, Milwaukee Gas Light Co., Milwaukee, Chairman

This newly organized group, concerned with one of the liveliest phases of the commercial gas business today, and succeeding the old Commercial Cooking Committee, has set for itself three long-range objectives: (1) to render the fullest service to those engaged in the quantity cookery field, (2) to fortify and extend the use of gas for quantity cookery, and (3) to put into use the greatest number of *modern* gas quantity cookery appliances. As this year's workquota it has decided to: gather and disseminate data on successful food service equipment sales methods, including campaigns, conducted by representative gas companies; prepare one or more booklets or pamphlets edited to inform the industry of current practices and trends in the food service industries and of the current status of gas equipment in this connection; present its findings, along with sales interpretations thereof, before the 1941 A. G. A. Hotel Restaurant and Commercial Sales Conference in Chicago.

L. A. Dubberke

In addition, the Food Service Equipment Committee will sponsor the publication of a new up-to-date Commercial Cooking Manual, currently receiving final editing at A. G. A. Headquarters and expected in published form sometime during the summer.

METAL TREATING AND MELTING COMMITTEE—Fred M. Reiter, Dayton Power and Light Co., Dayton, Chairman

Having met in Cleveland at the time of the recent National Metal Congress and Exposition, this committee is "making studies of applications of the newer industrial furnaces in the metallurgical field, both ferrous and non-ferrous." Considerable attention will be paid to government specifications for war materials and their possible effects upon gas sales and applications. In addition, it will sponsor an afternoon-long round-table discussion at the Baltimore A. G. A. Conference on Industrial Gas Sales (see page 72) an annual feature found to be highly productive of original thought and experience in a field developing so rapidly and diversely in so many different localities.

Fred M. Reiter

COMMITTEE ON USE OF GAS IN NATIONAL DEFENSE—Hale A. Clark, Michigan Consolidated Gas Company, Detroit, Chairman

Hale A. Clark

Closely allied to the work of the Metal Treating and Melting Committee, but coordinated with it so as to avoid duplication of effort, the work of this newly formed body will embrace a study of the effects of industrial plant extensions and new construction resulting from preparedness activity upon both the industrial gas load and industrial gas sales policy. Data has been collected on the multitude of different uses to which gas is being put in the defense program—be it for metallurgical, textile, cooking, space heating, processing or other purposes. It is expected that the reports of this committee will give the industry a clearer view of the part it is playing and can play in the nation's defense, and of the opportunities thus opened up.

COMMERCIAL REFRIGERATION COMMITTEE—Newell E. Loomis, Michigan Consolidated Gas Company, Detroit, Chairman

Newell E. Loomis

Here the objective is to consolidate the gains made bit-by-bit, and in rather limited areas, in the new field of gas-powered remote-unit refrigeration of the coolers, display boxes, rooms and other spaces utilized by business enterprises and institutions for food cooling and preservation. More intensive studies will be made of: competitive factors; the type, possibilities and limitations of service rendered by currently available as well as soon-to-be-available equipment; successful gas company sales procedures in expanding the field; what different classes of customers expect by way of refrigeration service; etc. The committee is also working on a uniform method of preparing estimates in a market where so many new and vital factors may be overlooked.

As in the case of the Food Service Equipment Committee, the Commercial Refrigeration Committee will utilize the Chicago Hotel, Restaurant and Commercial Sales Conference to make a presentation to the industry of the latest thoughts and findings in its bailiwick.

GAS ENGINE POWER COMMITTEE—Manley H. Clark, Southern Counties Gas Company, Los Angeles, Chairman

Manley H. Clark

As a starter, the committee is following the suggestions of the 1940 group in: (1) studying plans for financing the sale of gas engines, (2) continuing outstanding studies of waste heat utilization, (3) collecting more information on gas engine lubrication, and (4) publicizing successful sales techniques and programs. Because of the fact that the membership of this committee is spread from coast to coast, subcommittees have met and will meet in various areas by way of progressing with the above and other self-appointed assignments. However, the entire body will convene in Dallas in early May in connection with the annual A. G. A. Natural Gas Convention, where all subcommittee activities will be correlated.

Significant is the action which has made the Census of Gas Engines, inaugurated in 1936, an annual affair. The 1940 census was unusually productive of worthwhile data (see page 44), and the basic data for the 1941 census are now in process of collection.

VOLUME WATER HEATING COMMITTEE—Gebhard C. Beck, The Brooklyn Union Gas Company, Brooklyn, Chairman

G. C. Beck

Activity has already been considerable to assemble data on the many factors which influence the economical application and operation of gas water heating equipment in dishwashing installations—an important and growing commercial gas market. The information being assembled will include lists of available dishwashing apparatus and water heating devices suitable therefor, as well as design data thereupon. Competitive methods, possible design improvements, control arrangements, and state public health requirements will also be covered.

Other commercial fields for gas-developed hot water are also incorporated in the committee's agenda. Among these, hot-water-actuated ice cuber machines, instantaneous and "booster" water heating, and extra-sized hot water storage systems, hold both great interest and great promise.

JOINT COMMITTEE ON SUMMER AIR CONDITIONING—Charles R. Bellamy, Columbia Gas and Electric Corp., New York, Chairman

Valuable fundamental contributions are expected in view of the supervision the committee has assumed over research projects for both the A. G. A. Domestic and Industrial Research Committees. Residential summer air conditioning studies are being made cooperatively with the Association by and at the Engineering Experiment Station of the University of Illinois in Urbana. An

Charles R. Bellamy

investigation of summer cooling requirements at low relative humidities, a somewhat neglected field, is in process in the Pittsburgh laboratories of the American Society of Heating and Ventilating Engineers, and should soon bear fruit.

As it has done so productively in the past, the committee will keep in close touch with the many forward-looking developments constantly being made by manufacturers of summer air conditioning equipment, and will report from time to time as significant news comes to light. To foster better understanding of this intricate field, the committee will sponsor a round-table discussion at the Baltimore Conference on Industrial Gas Sales. All interested persons are invited to participate. Principally, the discussion will be devoted to industrial phases and combination applications.

GENERAL SALES COMMITTEE—George F. B. Owens, The Brooklyn Union Gas Company, Brooklyn, Chairman

G. F. B. Owens

As the first and only horizontal committee of the Section whose field is unrestricted by type of gas application, but whose interest lies solely in the sales, rather than the technical or detailed aspects, the General Sales Committee is testing out methods whereby the widely diversified sales practices used in different localities by different utilities and for different markets, can be weighed—and out of them come the strongest features, to be welded insofar as possi-

A typical Industrial and Commercial Gas Section Committee in action. Sessions like these are necessary to create productive ideas and plans for industry-wide use

ble into a powerful national gas industry sales plan. The difficulties of such a task are enormous, its possibilities unscratched.

As a more immediately fruitful activity, the committee is perfecting plans whereby all the vertical committees of the Section can be assisted in making their presentations more effective from the sales standpoint, and more significant to utility management.

PROMOTIONAL COMMITTEES AND ACTIVITIES

J. P. Leinroth

Nor will any of the promotional activities of the Section be relaxed in 1941. The National Advertising Committee of the Industrial and Commercial Gas Section, J. P. Leinroth, Public Service Electric and Gas Company, Newark, chairman, boasts a stronger-than-ever schedule of national business, technical and trade magazine space—including for the first time a 13-insertion schedule in the horizontal executive's magazine, *Business Week*. Wherever the theme applies, advertising copy is being slanted to the defense program. The Industrial and Commercial Publicity Program, conducted at Headquarters by Harry W. Smith, Jr., has been expanded and developed to its fullest extent yet—and reaches, through editorial pages, the readers of about 125 trade, technical and business magazines appealing to 33 of the most important customer-interest groups.

F. H. Trembly, Jr.

Again the Section will sponsor Combined Gas Exhibits at three of the leading national trade and industrial expositions. Frank H. Trembly, Jr., The Philadelphia Gas Works Company, Philadelphia, will direct the planning of the gas industry participation in the National Metal Congress and Exposition, at which over 6,000 square feet of floor space are purchased annually by the Association. All arrangements for the A. G. A. show at the National Restaurant Exposition, are again in the experienced hands of T. J. Gallagher, The Peoples Gas Light and Coke Co., Chicago. John J. Dunne, Consolidated Edison Company of New York, Inc., New York, will lead our efforts in connections with the National Hotel Exposition, at which the entire north wall of Grand Central Palace is regularly reserved for the gas industry presentation. In total, these three expositions are attended by at least 170,000 first-line industrial and commercial gas customers or prospects—all coming strictly for business purposes, and with equipment on their minds.

T. J. Gallagher

John J. Dunne

FOUR BIG CONFERENCE AND CONVENTION MEETINGS

The two big national industrial and commercial sales conferences conducted by the Section will be held respectively in Baltimore, Maryland, at the Lord Baltimore Hotel, on Thursday and Friday, March 13 and 14, and in Chicago, Illinois, at the Palmer House on Thursday and Friday, April 24 and 25. The program for the first of these, the 1941 A. G. A. Conference on Industrial Gas Sales is already complete (see below) through the efforts of a committee under Lawrence E. Biemiller, Consolidated Gas Electric Light and Power Co. of Baltimore. T. J. Gallagher of Chicago and his committee have progressed very considerably in scheduling vital, timely and contributional topics for the 1941 Hotel Restaurant and Commercial Sales Conference in Chicago.

L. E. Biemiller

Programs for the Industrial and Commercial Sessions of the A. G. A. Natural Gas Convention, Dallas, Texas, May 5-8, and the 23d Annual American Gas Association Convention, Atlantic City, New Jersey, October 20-23, are in the formulative stage.

That, in brief, is a blueprint of the 1941 activities of the A. G. A. Industrial and Commercial Gas Section—but it cannot describe the good which will result to the industry. No industry which supports with funds, manpower, time, thought and loyalty so complete an annual program of cooperative effort, can fail to reap a rich harvest in the form of increased, improved and better understood non-residential business.

Baltimore Industrial Gas Conference To Stress Defense Production

ONCE a year industrial gas men from coast to coast gather together for two concentrated days of head-scratching about the industrial end of the gas business. And that's at the American Gas Association Conference on Industrial Gas Sales . . . slated this year for the Lord Baltimore Hotel, Baltimore, Md., Thursday and Friday, March 13 and 14.

Lawrence E. Biemiller, Consolidated Gas Electric Light and Power Co. of Baltimore, chairman of the program committee for the A. G. A. Industrial and Commercial Gas Section, promises sales ideas, promotional help, research reports, utilization information, data on new developments, and, of course, entertainment, all to the choosiest tastes of each utility executive, sales manager, industrial gas salesman or manufacturer who attends. The program he and his committee have made up seems to back up his promise.

The whole schedule is listed under the banner slogan "Speed Defense Production with Industrial Gas." Directly following this theme will be papers such as: "Uses of Gas in the Production of Munitions, Particularly Shells and Guns for Aerial Warfare," sponsored by the Section's Committee on Use of Gas in National Defense; and "Five Minute Reports on Outstanding 1940-1941 Industrial Gas Equipment Developments," contributed by representatives from 6 leading industrial gas equipment manufacturing concerns.

Research findings and developmental installations of note will be discussed by: Frederic O. Hess, president, The Selas Company, who will report upon "Important New Developments in Applying Direct Radiant Gas Heat to Ceramic Firing"; William R. Teller, chief engineer, A. G. A. Testing Laboratories, on "Newly Developed Technical Information of Value in Applying Industrial Gas"; J. Paul Jones, Consolidated Gas Electric Light and Power Co., describing the "Application of Gas to New Type Air Conditioned Smoke Houses," and Carl P. Mann, manager, Drying Division, The Selas Company, who will discuss the place of "Gas Fuel for Short-Cycle Curing of Industrial Finishes."

Matters of organization, sales planning, promotional literature and rates will come up under a Symposium sponsored by the General Sales Committee of the Industrial and Commercial Gas Section on "Up-to-date Cooperative Sales Methods Between Industrial Departments and Equipment Manufacturers," with five industrial sales executives from various parts of the country all participating; "A Word From the

(Continued on page 79)

We like regular mailings to industrial customers and prospects—not just occasional bursts and flashes of direct mail. A good "trade organ" stacks up its interest-value, issue-by-issue, like a promotional savings account. So, pin the badge this month on Equitable Gas Company of Pittsburgh—for the well-edited, well-turned-out and (I'll bet) well-read GAS TRENDS—a 4-page 2-color monthly dedicated to "better industrial products with natural gas."

◆

If "a picture's worth 10,000 words" in print—why wouldn't a similar-installation photograph in your sales portfolio be worth 10,000 words of sales talk?

◆

If you'll cooperate with technical and engineering societies in framing their programs, you'll find yourself on the platform with a chance to sell on a mass-production basis. Take the case of Brooklyn Union's Carlton Roll. When the Process Industries Division of the A.S.M.E.'s Metropolitan New York Section slated a session on January 24 for a 5-way symposium on "Coffee Processing," Carl was asked to discuss the fueling end. Top men from Jabez Burns (roaster makers), General Foods (big operators), American Can, and the Coffee Bag Mfg. Assoc. (packers), were co-commenters. Nice work!—for rigging a solid mass-sales job in fancy company.

Gas usage by an outfit like A & P, nationally famous grocery chain, makes a good sales argument anytime—we all know that. But how many of us get such organizations to cooperate in designing gas-in-industry windows for the main office? Michigan Consolidated of Detroit did it with A & P—through a timely fruit cake display and the *mutually helpful* legend, "Gas-fired Bake Ovens help the A & P Bakers balance your holiday budget." Try this one on your boss; then go sign up the customer.

◆

Our publicity program's earning notice—the Advertising Club of Springfield, Mass., for example, had Harry Smith come up on January 14 to explain how we "borrow" trade journal editorial space, and how we make it sell industrial gas.

◆

A hot-foot for the flat-foot, with gas! Yessir, we find on good authority (the Bulletin de l'Association des Gaziers Belges, Feb. 1940) that in Vlaardingen (pronounced Vlaardingen), Holland, police and other officers at fixed posts stand, in cold weather, on perforated metal plates heated from below by two 7 cu.ft. per hr. gas burners "countersunk" in the pavement and protected from dirt and water by inverted cups between ports and warming plate.

◆

War is "major" business to Fred M. Reiter, Dayton Power and Light Co., and Chairman of our Metal Treating and Melting Committee—he has just been called to Washington as a Major in the Chemical Warfare Service, U. S. A. Notwithstanding, Fred will be with us in Baltimore on March 13-14 to lead the round-table session on getting and serving new metal treating and melting load.

◆

One industrial sales manager reports in writing directly to his company president *every solitary week*—and particularizes each report to specific sales projects, possibilities and disappointments. No danger of this executive (even though his is a major city) failing to appreciate the non-residential load!

◆

Maybe I just haven't been around, but I've never seen anything like the California Restaurant Equipment Company's new gas barbecuing gadget announced in INSTITUTIONS recently. Seven self-basting racks, carrying a total of 120 lbs. of meat, revolve in an enclosed broiler over oak wood chips heated to smoking conditions by the gas burners which do the barbecuing. Sounds like the broiler and the smoke house got married.

INDUSTRIAL AND COMMERCIAL NATIONAL ADVERTISING FOR FEBRUARY

The National Advertising Committee of the Industrial and Commercial Gas Section, J. P. Leinroth, chairman, and F. B. Jones, vice-chairman, announces that full-page advertisements will appear in the trade and business magazines listed below during the month of February. These advertisements, which will appear in 16 publications reaching a total audience of 288,587, are prepared in co-operation with the Committee on National Advertising as a part of the Association's national advertising campaign.

General Manufacturing

BUSINESS WEEK (Feb. 8—⅔ page ad)—"Delivery dates a nightmare? GAS can help you meet them"—a direct appeal to management to investigate the industrial advantages of GAS, citing two case histories to show the speed which gas-fired equipment makes possible in production.

Ceramic Industry

CERAMIC INDUSTRY—*Business Week* advertisement entitled: "Step up production with modern high speed GAS equipment"—plus tie-in paragraphs on the ceramic field.

Food Industry

FOOD INDUSTRIES—"Maybe your product isn't Doughnuts . . . but you can profit with modern GAS equipment just as the Johnson Doughnut Company does!"

BAKERS' HELPER (Feb. 15)—"Modernity was the Krohner idea . . . and, naturally, that called for GAS!"—the experience of a Connecticut bakery with modern GAS ovens.

Metals Industry

THE IRON AGE (Feb. 13)
STEEL (Feb. 17)
METALS & ALLOYS
METAL PROGRESS
INDUSTRIAL HEATING

—Business Week advertisement entitled: "Step up production with modern high speed GAS equipment"—plus tie-in paragraphs on specific results shown by plants in the metals field.

Hotel and Restaurant Field

AMERICAN RESTAURANT—"In Wilmington, headquarters of the duPont interests, GAS proves its worth"—the cooking story of the Wilmington Country Club.

HOTEL MANAGEMENT—"Sorry we didn't change to GAS long ago" . . . Harry Howell, Jacksonville, Florida. The cooking story of a noted restaurant that records savings with GAS.

CHAIN STORE AGE (Fountain and Restaurant Section)—"You can't tell the White Tower people about GAS! . . . THEY KNOW!"—a specific case story of the results with GAS equipment in one Pittsburgh store.

Processing Field

CHEMICAL AND METALLURGICAL ENGINEERING—*Business Week* advertisement entitled: "Step up production with modern high speed GAS equipment"—plus column of tie-in paragraphs.

With the exception of Hospital Field advertising, which appears in alternate months, here is another monthly portfolio on the advantages of GAS in the industrial and commercial field—new opportunities to stimulate the imagination of new prospects.

Use of Compressed Gas for Checking Gas Gravitometers

By J. W. PENNEY

Technical Asst., Boston Consolidated Gas Co., Boston, Mass.

SUMMARY

Specific Gravity is defined and the effect of water vapour content on gravity is illustrated. A method of checking gravitometers by the use of previously standardized compressed hydrogen-nitrogen mixtures is described. A check can be made in five minutes at a material cost of fifteen cents or less.

SPECIFIC gravity is usually defined as, "the ratio of the weight of gas to the weight of an equal volume of dry air, free from carbon dioxide, measured at the same temperature and pressure."*

Effect of Water Vapour

Since the specific gravity of water vapour is approximately 0.62 its presence in the gas will lower or raise the specific gravity of the mixture unless the dry gas has itself a specific gravity of 0.62. The extent of this change depends on the degree of saturation, the temperature and the specific gravity of the dry gas. To illustrate, the following data were tabulated for a dry gas of 0.400 specific gravity. Data are also given for conditions of wet air:

CONVERSION OF SPECIFIC GRAVITY TO DIFFERENT BASES

Condition	60° F.	70° F.	80° F.	90° F.	100° F.	110° F.
Dry gas/dry air	0.400	0.400	0.400	0.400	0.400	0.400 (assumed)
Dry gas/sat'd air	.403	.404	.405	.407	.410	.413
Sat'd gas/dry air	.404	.406	.408	.411	.415	.420
Sat'd gas/sat'd air	.407	.409	.413	.418	.425	.433

These or similar tables can be used to go from one basis to another. For example, the values obtained on an effusiometer (wet/wet basis) can be reduced to the dry/dry basis if the effusiometer jacket temperature is known. The usual calibration correction must be also applied.

Another point of interest is whether one wishes to know the specific gravity of the dry gas or of the gas under the moisture conditions prevailing at the point of sampling. The difference is appreciable with hot saturated gas.

Importance of Specific Gravity

Specific gravity has great importance since it directly affects pumping costs; controls the amount of entrained primary air and thereby affects combustion characteristics; and is a factor in the measurement of gas flow by certain types of meters.

Method of Checking

The method we have lately used to check the gravitometer has been to pass gas of known specific gravity through the recording gravitometer. The gas supply was a tank of compressed gas containing approximately 31% nitrogen and 69% hydrogen. The gravity on the dry/dry basis was determined by checking with an Edwards type balance and by the "balloon" method.

An orifice type flowmeter was used to indicate the rate of flow. No accessory flow regulators were necessary. For our particular condition a rate of 12 CFH for a period of four minutes was considered ample. Using a tank containing 60 C.F. of "Free" gas there would be sufficient gas for seventy checks in addition to the calibration requirements.

Method of Calibrating Tank Gas

This may be done by any reliable method. The effusiometer type instrument should not be used. Especial care should be taken to thoroughly dry both gas and air.

We have found the "balloon" method completely satisfactory. A glass bulb is weighed when filled with dry air and also when filled with the dry gas sample—all at the same temperature, pressure and volume of flask permits easy calculation of the gravity. The difference in weight using an approximately 600 c.c. "balloon" is about 0.5-0.6 grams for gas of 0.38 specific gravity!

Approximately one-half hour is required for a test and the apparatus costs about five dollars.

Economy of Using Compressed Gas

A considerable saving results from the use of compressed gas for checking gravitometers. Usual accurate checks require from 1 to 3 hours and the use of expensive equipment. Using the previously standardized compressed gas a check may be made in five minutes. The cost of gas used for checking is small. In our case where 12 CFH were required for five minutes, seventy checks could be made from a tank containing 60 cu.ft. of "free" gas. For this particular size tank the material cost per check would be about fifteen cents. This unit cost would be lower for larger tanks.

The sale of tanks containing gas mixtures of known specific gravity, i.e., previously standardized by the sellers, would be of advantage to many companies.

*J. D. Edwards, Technologic Papers No. 89, Bureau of Standards.

Bureau of Mines Presents Annual Report on Coal

THE annual report of the Bureau of Mines, U. S. Department of the Interior, covering research and technologic work on coal for the year 1940 (Information Circular 7143) has been made available. The report was prepared by Arno C. Fieldner, chief, Technologic Branch, and chief engineer of the Bureau's Coal Division, and W. E. Rice, fuel engineer of the Coal Division. It consists of 50 mimeographed pages together with illustrations and outlines a vast amount of work including a survey of the coke and gas making properties of American coals.

The present report is the fifth of a series of annual reports of technologic investigations conducted by the Bureau of Mines on the occurrence, properties, mining, preparation, and uses of coal. The research of the Bureau is carefully coordinated with the requirements of the producing and consuming industries, with a view to conservation of resources and protection of the health and lives of workmen employed in these industries. Such coordination is facilitated by the wide range of specialization of the several groups engaged in the coal studies.

Leaders of the Technical Section attending an important conference in New York on January 20. Left to right, front row: G. Hanshaw; H. L. Gaidry, vice-chairman, Technical Section; D. P. Hartson, chairman; F. M. Goodwin, past chairman; S. J. Modzikowski; Clarence H. Waring. Center row: C. S. Goldsmith; L. E. Knowlton; L. W. Tuttle; F. B. Cadmus; R. J. Sheridan; S. Cohn; and S. P. Cobb. Back row: R. H. Clark; H. W. Battin; A. A. Cullman; J. V. Postles, past chairman; R. E. Kruger; S. J. Beale; R. H. Arndt, and H. D. Lehman

Technical Section officers and members of the Committee on National Defense at luncheon prior to their meeting. Left to right: George F. Mitchell, chairman, Committee on National Defense and A. G. A. vice-president; D. P. Hartson, chairman, Technical Section; Major T. J. Strickler, Pres.; Walter C. Beckjord, immediate past president; W. Cullen Morris, and George S. Hawley, vice-president

Technical Section Plans Conferences, Maps National Defense Survey

AT a series of Technical Section meetings held in New York on January 20 and 21, plans were perfected for the forthcoming Distribution and Motor Vehicle Conferences to be held in Pittsburgh, Pa., April 21-23, and the Production and Chemical Conference, which takes place May 19-21 in New York, N. Y., and in addition paramount attention was given to problems of national defense. The committees which met on January 20 included the Distribution Committee and the program committees for the Production and Chemical Conference.

The meeting on the morning of January 21 was confined to chairmen and vice-chairmen of the Technical Section committees who met with the Section's officers to coordinate the work of the separate committees completed on the previous day. Immediately after the conference programs had been laid out, and preliminary plans made for the annual A. G. A. convention, this group took up the subject of national defense.

Various steps taken by the gas industry in the interests of national defense were reviewed, namely, (1) Action of the A. G. A. Executive Board in placing the services of the gas industry at the disposal of the government, announced in letters dispatched to the Secretaries of War, Navy and Interior; (2) Creation of a Committee on National Defense with George F. Mitchell, president, The Peoples Gas Light & Coke Co., as chairman; (3) Appointment of Marcy L. Sperry, president, Washington Gas Light Co., as liaison officer for the Association and the Committee on National Defense on matters relating to the gas industry arising in Washington; (4) Subsequent survey and other work undertaken by the Committee on National Defense.

Following luncheon, the Technical Section executive group was joined by Chairman Mitchell and the following members of the National Defense Committee: President T. J. Strickler; Past President Walter C. Beckjord, Vice-President George S. Hawley, Managing Director Alexander Forward, W. Cullen Morris, F. H. Lerch, Jr., R. J. LeBoeuf, and E. Holley Poe, representing the Natural Gas Section. With Mr. Mitchell acting as chairman of the meeting, Dorr P. Hartson, chairman of the Technical Section summarized the morning's discussion of various phases of national defense. He then called on the individual committee chairmen to present their views on this important subject. A general round-table discussion of all phases of national defense followed.

Reporting to the Executive Board meeting the following day, Mr. Mitchell stated that the Technical Section committees were ready to collect and assemble information on steps taken by gas companies in the United States and Canada for the protection of life and property. This step was approved by the board and the Section will proceed with this work.

Safety Pilot Inventor Wins Gold Medal

GEORGE LAYER, general foreman in the gas distribution department of the Public Service Electric and Gas Co., Newark, N. J., received the Thomas N. McCarter Gas Award on December 18 for "inventing and perfecting one of the first successful safety pilots to be used in the gas industry." The award, consisting of a gold medal and certificate, was presented by Edmund W. Wakelee, president of the company. It was established by Mr. McCarter, chairman of the board of Public Service, who also donates the coveted McCarter Medals which are awarded by the American Gas Association.

Mr. Layer initiated and perfected the safety pilot with the assistance of Conrad Schuck, superintendent of distribution. A patent was obtained in May, 1923, and the device, with some modification from the original, is now manufactured by the Patrol Valve Co. of Cleveland.

Altering the principle of previous safety pilots, Mr. Layer evolved the cycle now known as the patrol valve cycle. This cycle keeps the main gas valve closed while the burner is inoperative. When the appliance calls for gas by the cooling of the thermostat, the thermostat opens and allows a small quantity of gas to flow to a small burner adjacent to the pilot. This burner is ignited by the pilot and the heat from this flame actuates a bi-metal, which in turn, through a snap action, opens the main valve. This snap action prevents the main valve from ever opening and allowing the escape of gas from the burner in case the pilot is extinguished. This action of the patrol valve, affords great protection and has proved its worth after more than 10 years of practical application.

Laboratories

N. T. SELLMAN, *Chairman, Managing Committee*
R. M. CONNER, *Director*
W. H. VOGAN, *Supervisor, Pacific Coast Branch*

Research in the Development and Revision of American Gas Association Requirements

By W. B. KIRK

A. G. A. Testing Laboratories

FOR more than 15 years the American Gas Association has carried on a continuous program of research supplementing the preparation and revision of its approval and listing requirements. This work, while an essential part of the Association's testing and certification activities, so far has not received a great amount of recognition and is probably unknown to all but a few of the men in our industry.

Briefly, the purpose of this type of research is to provide technical data needed by the various subcommittees of the Approval Requirements Committee in developing suitable testing specifications, or in revising existing ones to conform with advancements in the design of appliances and accessories.

It may be stated that without these supplementary studies it would not have been possible for the appliance certification program of the gas industry to develop into the most outstanding and nationally accepted plan of its kind. Accordingly, it seems appropriate to describe at this time the nature of this activity as well as its relation to the movement launched some 15 years ago largely in the consumers' behalf.

Committee Procedure

Before developing the nature and scope of requirements research work, it might be well to consider, briefly, the committee procedure of which this work is an integral part. Up to the present time, approval and listing requirements covering some 40 different types of appliances and accessories have been prepared. In addition, our subcommittees have completed two sets of installation requirements. The preparation of all these standards has been supervised by the A.G.A. Approval Requirements Committee, although their technical development rests largely with the various subcommittees. It may be noted that the Approval Requirements Committee functions as a Sectional Committee of the American Standards Association, and, as a consequence, practically all of these requirements have been adopted as American Standards.

As might be inferred from the large number of different appliances and accessories included in this broad certification field, the problems investigated by the Testing Laboratories annually, in order that the preparation and revision of requirements may be kept apace with developments in the art, vary widely. For example, during the past year research assignments undertaken by the Testing Laboratories covered approximately 35 different problems, varying from the development of complete and new requirements for flexible metal hose to a study of lubricants for gas burner valves to be used on appliances consuming liquefied petroleum gases.

A considerable portion of this investigational work was devoted to problems having for their ultimate objective the expansion or revision of an existing set of requirements. This type of research becomes important when it is considered that in many instances revisions are effected in order that the requirements may not represent a barrier to worth-while and ingenious improvements in appliances or accessories. It has been recognized that unless every precaution is taken, any established standards, regardless of their technical merit, may become restrictive as a result of changing designs. For this reason, the American Gas Association has set up, through its committee structure, a sufficiently flexible administrative procedure to effect, without undue delay, any necessary revisions in its standards, and, in turn, has supplemented this procedure with its research activities.

An example of this type of research may be found in the current year's activities. This case involved the revision of requirements applying to electrical ignition devices which are finding an increasingly widespread use on domestic gas ranges. Heretofore, standards for this type of accessory covered only a specific application of the electrical ignition principle. However, during the year, two other types of electrical igniting devices embodying entirely different principles were developed.

As a result, the Subcommittee on Approval Requirements for Gas Rangers authorized the Testing Laboratories to conduct research necessary to permit expansion of the requirements to cover, adequately, the new types of ignition systems. This work was promptly undertaken, and a report comprising the technical findings submitted to the gas range committee at its following meeting. This entire procedure culminated in the adoption of requirements sufficiently broad to cover all types of electrical ignition devices now recognized. This example illustrates clearly the flexibility of the requirements procedure, and the speed with which the necessary revisions can be effected when a need is demonstrated.

Average Performance Rated

A factor which assumes considerable prominence in requirements research work is, that the requirements covering performance and constructional features which are not related to safety are minimum ones in the sense that they reflect average performance capabilities, or constructional characteristics of a representative number of appliances or accessories of the type under consideration. Obviously, adoption and enforcement of specifications, aside from those concerned solely with safety which are be-

Requirements Committee investigation of portable bake ovens, illustrating sampling products of combustion, wall temperature tests and oven thermostat test

yond the ability of a majority of contemporary appliances to meet, could well be considered an untenable and discriminatory procedure.

Adherence to a policy of establishing requirements other than those having safety aspects which are consistent with contemporary performance levels, requires that the Testing Laboratories, in the conduct of their research work, investigate a representative group of appliances or accessories involved. This group of appliances must, in each case, be sufficiently large and representative to demonstrate beyond doubt that test methods being developed will be applicable to all types, makes, and modifications of a given class of equipment. Moreover, after the technical soundness and general applicability of the requirement, and accompanying test method have been verified by a sufficient number of tests, it is generally necessary to apply the same test to an additional group of appliances or accessories in order to demonstrate that a reasonable percentage of contemporary equipment can comply with the proposed specifications.

Noise Investigation

An outstanding example of this aspect of requirements research work is the comprehensive investigation currently being conducted on noise characteristics of domestic appliances. To date, over 100 different appliances including furnaces, boilers, gas ranges, space heaters, and water heaters have been examined. On completion of this study, there will be reasonable certainty that the requirements adopted by the committees will not only be technically sound and adequate to insure quiet performance, but will, in addition, not prove to be unduly restrictive.

In many instances, requirements research work is of a pioneering nature, and as such it becomes necessary to complete specifications for a given type of appliance or accessory for which standards or test codes did not previously exist. In these cases, it is, of course, essential that the investigational work be of a most comprehensive nature. During the present year, several problems of this nature have been undertaken. Among these may be mentioned the preparation of requirements for combination coal and gas ranges, flexible metal hose, manual main control valves, and pilot gas valves.

In addition to developing complete sets of new requirements, it is almost always necessary, in adding new sections to existing requirements to devise original test procedures, and to develop, in many cases, suitable test equipment. An excellent example of this may be found in the study designed to improve the oven heat distribution test currently applied in gas range testing. Under the present specifications, the uniformity of color of products baked in an oven is judged visually, and this, in some instances, leads to controversy as to differentiation between acceptable and excessive variations. The Testing Laboratories' engineers, after considerable study, developed a photoelectric reflectometer to measure and evaluate accurately color gradations of baked products.

Studying operating characteristics of furnace temperature limit controls

This is the first application of the photoelectric cell to such instrumentation, and provides a basis for substituting an accurate scientific test method for a rather crude visual observation. Similarly, other studies have been devoted to improving testing methods and instruments, in order that routine test work might be conducted more efficiently, and more accurate and reproducible results obtained.

Another example, illustrating specifically investigations having for their purpose the improvement of existing test procedures, is the study of noise characteristics of domestic appliances, to which reference was previously made. Heretofore, various approval requirements have contained specifications limiting the magnitude of certain noises resulting from extinction of burner flames. Here again, however, the criterion of acceptable performance was the auditory sense, which, as is commonly known, is subject to wide variance with different individuals, as well as to error for any given individual as a result of differences in ambient noise levels. The investigational work now under way makes use of a standard sound-level meter, and it is anticipated that the requirements when finally developed will be set up in terms of standard engineering units.

When it is considered that during the past few years the testing and certification program has been extended into the field of commercial appliances, accessories, and appliances for use with butane gas, it might be expected that the need for requirements research would tend to decrease as these major problems were completed. However, such has not proved to be the case, primarily for the reason that as the number of appliances and accessories included in the scope of this activity is increased, the research needed in maintaining each individual standard on a level consistent with modern developments also increases.

The extent to which it has been necessary to revise requirements in order that they may be kept abreast of appliance development is well demonstrated by the gas range standards. These standards, when published in 1928, contained 165 distinct specifications and covered only the performance of gas ranges on various types of city gases. The latest requirements for ranges, 1940, contain 558 separate requirements covering ranges for use on city gases as well as a large number of additional requirements for propane, butane, and butane-air.

Another phase of the requirements research program, which should be of general interest, is a constant endeavor to simplify the requirements, and to replace restrictive constructional specifications by performance tests. As may be readily imagined, any construction requirement has the inherent defect of excluding any but acceptable designs by prohibiting certain specific types or by requiring certain others. On the other hand, a properly devised performance test requires that the structure, as a whole, yield designed performance of an acceptable level without regard to specific constructional details. This aspect of requirements research work is, of course, closely allied with that phase of the work previously discussed, which deals with the development of improved test procedures and test equipment, since, as may be appreciated, construction requirements may exist as a result of a lack of suitable instruments, or test methods, for determining the characteristics desired.

Naturally, the objective of the previously mentioned program is to provide the consumer with a safe appliance capable of performing in an acceptable manner the various tasks for which it was designed. It is an equally important function of this pro-

gram to accomplish this purpose without undue burden on the industry, and without setting up standards which would in any way restrict the application of ingenuity on the part of manufacturers in their efforts to improve their products. These objectives have been achieved largely through the effects of our various requirements committees. However, requirements research activities have, in providing technical data required by these committees, been a contributing factor in the success of the entire program.

Refrigerator Standards Are Revised

THE Subcommittee on Approval Requirements for Refrigerators Using Gas Fuel, of which W. S. Walker of the Consolidated Edison Company of New York is chairman, recently completed revisions to standards for gas-fired refrigerators. Changes and additions agreed upon are included in recommended revisions printed and distributed to member gas companies and manufacturers of gas-fired refrigerators and others interested, on January 14, 1941, for review and criticism.

All sections of these requirements have been brought up to date in line with recent developments. In the interest of simplification, all constructional details relating to various gases are now grouped under Part I. Electrical equipment, when employed, must meet applicable provisions of the National Electrical Code approved as American Standard. Gas pressure regulators, automatic pilots, and semi-rigid gas appliance tubing and fittings when furnished are required to comply with constructional details of applicable listing standards.

Performance sections devoted to city gases have been expanded to include recommendations of the Subcommittee on Test Gases and Test Pressures which prescribe more comprehensive and rigid tests covering combustion and burner and pilot operating characteristics. Particular attention has been devoted to automatic pilots by inclusion of additional tests in line with those prescribed by the listing requirements covering continued operation tests. The section devoted to propane gas has been extended to cover liquefied petroleum gases, thus permitting approval for propane, butane, and intermediate mixtures.

In order that all suggestions and criticisms from the industry may be available for consideration by the subcommittee at the time of its next meeting, it is requested that they be submitted promptly. They should be addressed to R. B. Harper, chairman, A.S.A. Sectional Committee, Project Z21, A. G. A. Approval Requirements Committee, in care of the American Gas Association Testing Laboratories, 1032 East 62nd Street, Cleveland, Ohio.

Gas Appliance Research in America Wins Praise in England

(Reprinted from London *Gas Journal*, November 6, 1940)

FOR several years now the American Gas Association, through its Committee on Domestic Gas Research, has carried out a program of basic research on domestic gas appliances. The object has been to make available technical data which could be employed by appliance manufacturers and gas engineers in improving efficiencies and other performance characteristics of such equipment. This has constituted one particular phase of a broad program of research into problems of production, distribution, and utilization of gas designed to render more efficient gas service to domestic, commercial, and industrial consumers.

Several bulletins summarizing the work have been prepared. Three cover gas ranges, a fourth deals with the design of atmospheric gas burners, while another, issued about six months ago, is concerned with domestic gas water heating. We have had occasion previously to congratulate the Association on the results of this type of cooperative research, and we have no hesitation in commending the work as a whole. The data which have been collated are bound to be of material assistance to manufacturers in appliance development work in the United States, and of help to gas undertakings in affording guides to installation problems.

When the program of research was inaugurated it was well appreciated by those responsible that all aspects of gas appliance design had benefited by the research and development carried out by appliance manufacturers and individual gas undertakings. It was not intended that the investigations should be a substitute for these separate and independent activities. Actually, far from discouraging these independent activities, the scope and intensity of such work have increased during the period covered by the A. G. A. investigations. We are not at all surprised that this has been the case; and it constitutes a strong argument in favor of cooperative industry research. It does give rise to a better understanding of the desirability and value of research. The work has produced technical data capable of wide application and has served to eliminate unnecessary duplication of the same work in a number of independent laboratories. To this extent it has freed the facilities and resources of separate undertakings for concentration on product development and other specific application of the data.

Investigations to which we have referred in the *Journal*, have obviously been carried out thoroughly and with the exercise of imagination. We have just received the latest A. G. A. publication. It is concerned with domestic gas range research and it does not fall short of the high standard established previously.

Gas ranges in recent years have received increasingly greater attention from both commercial and technical men. As a result their use has increased and their performance has been greatly improved. In spite of radical changes and improvement in competitive types of equipment, their sale has been increased greatly during the past few years. In American homes today 200,000,000 meals are prepared on more than 16,000,000 gas ranges. Over a million new gas cooking appliances are placed in homes each year. These modern ranges, with their smart streamlined appearance, automatic lighting and heat controls, efficient operation, and numerous convenience features, are now available in a wide variety of sizes and styles, all designed to meet the most exacting requirements.

The technical advances in gas ranges in the United States of America may be attributed to gradual refinements of various features as experience has disclosed opportunities for improvements in existing designs, to independent research carried on by manufacturers and gas undertakings to meet specific problems, and, not least, we feel sure, to the organized cooperative research program which has been carried out by the American Gas Association.

Directory of Appliances Issued in New Form

ONE of the most important services of the American Gas Association Testing Laboratories is the publication of a complete directory of all gas appliances and gas appliance accessories certified by them. Supplementing the Laboratories' program of approval testing, certification, and inspection, this directory serves as a reference guide to consumers and others interested in the purchase or sale of such equipment complying with national standards. For the added convenience of its many users, a number of revisions and additions have been incorporated in the January, 1941, issue of the Directory of Approved Gas Appliances and Listed Accessories for the first time.

This directory is published quarterly in complete form as of January 1, April 1, July 1, and October 1, each such issue superseding all previous lists. Supplements to the quarterly directories are published as of the first of the 8 intermediate months. The various types of appliances are indexed alphabetically in accordance with the type of gas for which they are approved. Likewise, the various kinds of accessories are indexed

in alphabetical order. Names and addresses of manufacturers and distributors are presented in alphabetical order under each type of appliance or accessory, together with a list of their approved or listed products.

To facilitate locating listing of various manufacturers' products, a manufacturers' index was added this year. Likewise, in order to identify a manufacturer of a product from its trade-mark, or trade name, a trade name index was also added. Although this second section is a rather extensive addition, requiring more than 30 pages, it is believed that its convenience will more than offset the additional cost of printing.

While nearly 2,000 copies of each issue of the directories are distributed to regular subscribers to this service, as many as 300 copies each month are supplied to consumers, gas appliance distributors, and federal, state, and municipal agents whose requests for information bring them in contact with the Laboratories' approval testing, certification, and inspection program for the first time. To apprise these individuals of the scope and purpose of these directories, the foreword was revised to include a brief description of how gas appliances and accessories are tested and certified for compliance with applicable American Standard Approval or Listing Requirements, and the manner in which such standards have been prepared. Reference is also made to the Laboratories' inspection program by which production models of certified equipment are periodically checked at manufacturers' plants, dealers' and jobbers' warehouses and salesfloors, as well as on consumers' premises, to insure that they are fully entitled to display the Laboratories Approval Seal or Listing Symbol.

The January 1, 1941, issue of the directory contains over 17,000 individual appliances and accessories. If variations due to color combinations, trim, and other details were taken into consideration, more than 300,000 models are listed. These include some 37 types of domestic and commercial gas-burning equipment and their accessories, for use with natural, manufactured, mixed, and liquefied petroleum gases, for which American Standards have been prepared.

Gas Superintendent Dies Suddenly

PHILIP G. NEWBRANDT who was superintendent of gas pressure in the Cincinnati Gas & Electric Company for the past thirty years died suddenly with a cerebral hemorrhage on January 7. Mr. Newbrandt was in charge of transmission line pressures and holder maintenance in the Greater Cincinnati area supplied by the Cincinnati Gas & Electric Company. He was active in inspecting a new 1,300 M cu.ft. holder being built at the East Works Plant on the day before his death. His death was a shock to all his friends and coworkers.

Selas Triples Manufacturing Space for Quality Gas Equipment

Drinking a toast in celebration of the new Selas plant (shown above) are, left to right: Frederic O. Hess, president, The Selas Co.; H. K. Richardson, Westinghouse Elec. & Mfg. Co.; Leslie Brown, Lenox, Inc.; Les Bensel, Public Service Elec. & Gas Co.; Stewart Lee, New York Shipbuilding Co.; James Mullarkey, Public Service Elec. & Gas Co.; J. Kniveton, The Selas Co.: John E. Hubbell; J. P. Leinroth, Public Service Elec. & Gas Co.; and J. E. Schneider, president, Industrial Trust Company

MACHINERY, floor space and glass-brick walls don't, by themselves, make a successful manufacturing plant—it's the men, the brains and the company they serve. But more adequate machinery and floor space (and even glass-brick walls) can make it a lot easier for a manufacturer to do a better job. That's why Frederic O. Hess, president of The Selas Company, Philadelphia, producer of quality gas combustion equipment and furnaces for a long list of America's process industries is so proud of the new plant opened by his company on Saturday, January 4, with an informal reception for 44 gas utility and general manufacturing company friends.

All Facilities Centralized

All development, engineering and manufacturing facilities are now centralized in three modern structures on Erie Avenue west of D Street, one of these being the ceramic plant where all of the extra-precision refractory parts of Selas equipment are formed and fired. A separate building is provided for bricking and insulating large assembled units, this to prevent abrasive dusts from reducing the accuracy and life of machinery used in the main plant structure. The main building itself houses offices, sales and display rooms, research laboratories, and the engineering design and development divisions, in addition to general manufacturing and assembly facilities. The sum total covers over 24,000 square feet of floor space, three times the previous area at 18th and Indiana Streets.

Being the culmination of 10 years of planning, the new quarters provide up-to-the-minute conveniences for every employee and job—and considerable leeway for future growth. Luminous tube lamps give shadowless lighting throughout. Glass-brick walls and vast, uninterrupted banks of glareless casement windows capitalize to the fullest upon daylight. The truck unloading area is enclosed with doors at either end to form a heat-lock and eliminate chilly drafts during inclement weather. Heavy concrete flooring is the rule in production spaces. Latest type circular wash-fountains, showers and plumbing are provided. To one who has seen hundreds of manufacturing plants, the "ne plus ultra" design and planning quarters look almost disproportionately large.

For the building inaugural reception, the yet unfitted research laboratories were converted with flowers and candle-lit bar and buffet luncheon settings into an appropriate lounge.

Baltimore Industrial Conference

(Continued from page 72)

Rate Committee" by Clinton Lee Follmer, chairman, A. G. A. Rate Committee; "The Part Industrial Men Can Play in the Most Effective Use of Sales Promotional Material developed through exhibits by Harry W. Smith, Jr., A. G. A. director of industrial gas publicity; and other titles like "The Sale and Use of Gas Unit Heaters in Industrial Plants" or "Take Your Cue from Your Customer—Industry."

No subject before the conference will carry more significance than that selected by Charles M. Cohn, executive vice-president of Consolidated Gas Electric Light

and Power Co. of Baltimore, for his featured luncheon address on Thursday noon—"The Industrial Department's Responsibility to Management." And because they have proved themselves so valuable in the past, there will also be one full afternoon devoted to committee-sponsored Round-Table Informal Discussions in three vital brackets: "Industrial Sales Managers Session," George F. B. Owens, chairman, General Sales Committee; "Metal Treating and Melting Progress," Fred M. Reiter, chairman, Metal Treating and Melting Committee; and "Gas Air Conditioning With Particular Emphasis on New Industrial Applications and Combination Installations," Charles R. Bellamy, chairman, Joint Committee on Gas Summer Air Conditioning.

H. Carl Wolf, chairman, and George F. B. Owens, vice-chairman, A. G. A. Industrial and Commercial Gas Section, will preside. An old-fashioned Maryland Seafood Dinner, with music and an oyster opening demonstration in which conferees may try their skill at their own and their hands' risk, will be held Thursday evening. The industrial equipment division of the Association of Gas Appliance and Equipment Engineers promises a Reception for Ladies and Gentlemen on both days at the Industrial Gas Equipment Club in Baltimore.

Aiding Christmas Cheer

Mary Spear, long time member of the A. G. A. staff, reports to the rest of the staff on the distribution in cash and groceries of the A. G. A. Christmas fund. Collected each year from members of the staff to give Christmas cheer to some family in need, the expenditure of the money is described at the annual Christmas party, which features an amateur show by the younger members of the staff. The back drop is part of a curtain painted by the mailroom staff which conceals a makeshift stage in the stenographic room of A. G. A. headquarters. The photograph was taken by A. Gordon King, Technical Section secretary

Flashlight Batteries

(Continued from page 65)

insulating material (wood is satisfactory) on which is mounted a clamp to securely hold the cells, a coil having a resistance equal to the resistance of bulbs in general use, and a volt-meter having a resistance of 100 ohms per volt and at least 10 divisions of its scale per volt. A socket can be provided in place of the coil to receive the standard bulb used by the company. In companies where two-cell flashlights are used with 2.6 volt, 300 milliampere bulbs, any set of cells testing 2.3 volts in the testing device in the morning following a full night of rest is satisfactory for a normal day's work. This is borne out by the information contained in the record of a typical test.

General

The use of specifications and testing devices has the further advantage of permitting purchasing departments to allow any manufacturer to bid for its business and on the basis of the test, a price can be set indicating the worth of the cells to the company.

It should not be inferred that cells which are satisfactory for meter reading purposes are suitable for other purposes. Cells which are used by Transportation Departments in automobiles, by collectors, or by servicemen for turning on and off of service, require entirely different specifications from those for meter reading. Long shelf life may be more important than long burning time alone because the latter cannot be realized with industrial cells due to the infrequent use to which the cells are subjected and the rapidity with which they may deteriorate.

662 Gas Refrigerators for U. S. Project

GAS refrigeration is the choice for the federal government's new low-cost housing projects in El Paso, Texas. A total of 662 gas refrigerators have been installed in two new apartment house groups in that southern city, to provide economical, dependable refrigeration for tenants.

Personnel Service

SERVICES OFFERED

Man exceptionally qualified to head **Industrial** Department of large utility, to serve a **combustion engineering** concern, or large consumer. Experienced in market surveys. Sales promotion, consulting with consumers on utilization. Authority on relative merits of fuels. Writes clearly, in non-technical style. Resourceful—friendly. Registered professional engineer, New York and Pennsylvania. **1401.**

Heating **Sales Engineer,** (48) exceptionally well rounded experience in appliance sales. 20 years industrial, housheating and other appliance experience with natural and manufactured gas. Experience covers supervision, training of men as well as other phases of selling and installing equipment. Employed but desire position with more responsibilities and possibilities. Graduate Engineer. **1402.**

Water Heater Sales Up 6% a Year. In four years, under my direction, a gas utility with five to six thousand meters increased its automatic **water heater saturation** from 10% to 34% on a $1.30 water heating rate. 16 years experience in building gas loads and gross and net revenues. **1405.**

Industrial gas **sales** and **utilization:** Specialist, with over 23 years experience, covering manufactured and natural gas, and ranging from open hearths to bakery ovens. Chemical engineer with masters degree. Diverse experience includes market surveys to the selection of equipment for applying gas to the broadest range of uses. **1406.**

Representation for a good **quality merchandise** desired by man who has had a number of years experience in all branches of the gas business. Prefer representation where both salary and commission will be paid and where appointments can be made in advance. Can furnish A-1 references. **1407.**

POSITIONS OPEN

Operating Foreman. Young practical gas maker with executive ability who can take charge in foreman's absence. Must have had all 'round practical experience. To grow up with medium size Eastern company; $40.00 to start. **0354.**

Sales Agents to represent well-known manufacturer of gas space heating equipment. Territories open in Nebraska, Minnesota, Iowa, Wisconsin, Illinois, Indiana, Missouri, New York State, and Western Pennsylvania. Exclusive territory protection, no objections to man selected handling non-competitive line, remuneration straight commission. State detailed qualifications in application. **0355.**

Utilization Gas Engineer. Middle West Manufacturer has opening for a trained man who understands the development and testing of gas ranges. Good opportunity for the right man. **0356.**

Salesmen or Factory Representatives to handle additional line of ranges, product of nationally known manufacturer; one who calls on the utility companies and tank gas trade. Territories, Middle Atlantic and South Eastern States. **0357.**

Sales Manager to take charge of distribution of internationally known gas appliance. Must be able to make small investment. **0358.**

Manufacturer requires the services of a **graduate engineer** who has had experience with research and development of cooking and heating appliances. His experience should cover both gas and oil burner designs and he should be familiar with combustion problems. His salary would be commensurate with past experience. **0359.**

Man capable of **taking charge** of small natural gas property, 250 meters maximum. Necessary to do all work in connection with distribution and service lines, setting meters and regulators, care of gas wells, meter reading and collections, including billing to consumers. State age, experience, and salary expected. **0360.**

1941 Advisory Council

F. M. BANKS.....Los Angeles, Calif.
C. W. BENNETT.....Detroit, Mich.
HALE A. CLARK.....Detroit, Mich.
H. E. CLIFF.....Newark, N. J.
H. C. COOPER.....Pittsburgh, Pa.
HUGH CUTHRELL.....Brooklyn, N. Y.
MERRILL N. DAVIS.....Bradford, Pa.
DAVIS M. DEBARD.....New York, N. Y.
H. A. EHRMANN.....New York, N. Y.
H. L. FARRAR.....San Francisco, Calif.
F. B. FLAHIVE.....New York, N. Y.
O. H. FOGG.....New York, N. Y.
F. M. GOODWIN.....Boston, Mass.
ROBERT W. HENDEE...Colorado Springs, Colo.
C. W. HUNTER.....Philadelphia, Pa.
R. L. MANIER.....Syracuse, N. Y.
N. C. MCGOWEN.....Shreveport, La.
F. X. METTENET.....Chicago, Ill.
D. H. MITCHELL.....Hammond, Ind.
M. I. MIX.....Chicago, Ill.
B. J. MULLANEY.....Chicago, Ill.
HENRY OBERMEYER.....New York, N. Y.
JAMES F. POLLARD.....Seattle, Wash.
J. V. POSTLES.....Philadelphia, Pa.
FRANKLIN T. RAINEY.....Columbus, Ohio
W. FRANK ROBERTS.....Baltimore, Md.
J. F. ROONEY.....New York, N. Y.
ELMER F. SCHMIDT.....Dallas, Texas
OTTO SNYDER.....Albany, N. Y.
W. E. STEINWEDELL.....Cleveland, Ohio
JOHN K. SWANSON.....Saskatoon, Canada
FRANK H. TREMBLY, JR.....Philadelphia, Pa.
GEORGE E. WELKER.....Oil City, Pa.
T. R. WEYMOUTH.....New York, N. Y.

AFFILIATED ASSOCIATIONS

Association of Gas Appliance and Equipment Manufacturers
Pres.—W. E. Derwent, Geo. D. Roper Corp., Rockford, Ill.
Exec. Sec.—C. W. Berghorn, 60 East 42nd St., New York, N. Y.

Canadian Gas Association
Pres.—J. B. McNary, Canadian Meter Co., Ltd., Hamilton, Ont.
Sec.-Tr.—G. W. Allen, 7 Astley Ave., Toronto.

Empire State Gas and Electric Association
Pres.—Irving K. Peck, Binghamton Gas Works, Binghamton, N. Y.
Chairman, Gas Section—F. F. Ingwall, Binghamton Gas Works, Binghamton, N. Y.
Sec.—George H. Smith, Grand Central Terminal, New York, N. Y.

Gas Meters Association of Florida and South Georgia
Pres.—C. D. Littlefield, Peoples Gas Co., Miami Beach, Fla.
Sec.—H. Stuart Johnson, Florida Public Service Co., Orlando, Fla.

Illinois Public Utilities Association
Pres.—E. F. Kelly, Central Illinois Public Service Co., Springfield, Ill.
Sec.—Jack Abbey, Room 608, Illinois Building, Springfield, Ill.

Indiana Gas Association
Pres.—E. C. Weston, Indiana Gas Utilities, Richmond, Ind.
Sec.-Tr.—H. Wayne Thornburg, Central Indiana Gas Co., Anderson, Ind.

Michigan Gas Association
Pres.—Fred P. Cope, Consumers Power Co., Saginaw, Mich.
Sec.-Tr.—A. G. Schroeder, Michigan Consolidated Gas Co., Grand Rapids, Mich.

Maryland Utilities Association
Pres.—J. A. Stoll, Baltimore Transit Co., Baltimore, Md.
Sec.—W. D. Haley, 16 Carroll Ave., Takoma Park, Md.

Mid-Southeastern Gas Association
Pres.—J. R. A. Hobson, Director of Public Utilities, Richmond, Va.
Sec.-Treas.—Edward W. Ruggles, Mid-Southeastern Gas Association, Raleigh, N. C.

Mid-West Gas Association
Pres.—C. B. Dushane, Jr., American Meter Co., Chicago, Ill.
Sec.-Tr.—Roy B. Searing, Sioux City Gas & Electric Co., Sioux City, Iowa.

Missouri Association of Public Utilities
Pres.—B. C. Adams, The Gas Service Co., Kansas City, Mo.
Sec.-Tr.—N. R. Beagle, Missouri Power & Light Co., Jefferson City, Mo.
Asst. Sec.—Jesse Blythe, 103 West High St., Jefferson City, Mo.

New England Gas Association
Pres.—J. A. Weiser, The Newport Gas Light Co., Newport, R. I.
Exec. Sec.—Clark Belden, 41 Mt. Vernon St., Boston, Mass.

New Jersey Gas Association
Pres.—Frank H. Darlington, Peoples Gas Co., Glassboro, N. J.
Sec.-Tr.—H. A. Sutton, Public Service Electric and Gas Co., Newark, N. J.

Ohio Gas and Oil Men's Association
Pres.—T. C. Jones, The Delaware Gas Co., Delaware, Ohio.
Sec.-Tr.—Frank B. Maullar, 811 First National Bank Bldg., Columbus, Ohio.

Oklahoma Utilities Association
Pres.—R. K. Lane, Public Service Company of Oklahoma, Tulsa, Okla.
Sec.—Kate A. Niblack, 625 Biltmore Hotel, Oklahoma City, Okla.

Pacific Coast Gas Association
Pres.—Robert A. Hornby, Pacific Lighting Corp., San Francisco, Calif.
Mang. Dir.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.

Pennsylvania Gas Association
Pres.—M. A. Boylan, Scranton-Spring Brook Water Service Co., Scranton, Pa.
Sec.—William Naile, Lebanon Valley Gas Co., Lebanon, Pa.

Pennsylvania Natural Gas Men's Association
Pres.—W. H. Haupt, Acme Drilling Co., Coudersport, Pa.
Sec.-Tr.—B. H. Smyers, Jr., 435 Sixth Ave., Pittsburgh, Pa.

Southern Gas Association
Pres.—C. B. Wilson, Arkansas Louisiana Gas Co., Little Rock, Arkansas.
Sec.-Tr.—L. L. Baxter, Arkansas Western Gas Co., Fayetteville, Ark.

Wisconsin Utilities Association
Pres.—A. P. Gale, Wisconsin Power & Light Co., Madison, Wis.
Exec. Sec.—A. F. Herwig, 135 West Wells St., Milwaukee, Wis.

AMERICAN GAS ASSOCIATION

HEADQUARTERS, 420 LEXINGTON AVE., NEW YORK, N. Y.

OFFICERS AND DIRECTORS

President	T. J. STRICKLER	Kansas City, Mo.
Vice-President	GEORGE F. MITCHELL	Chicago, Ill.
Vice-President	GEORGE S. HAWLEY	Bridgeport, Conn.
Treasurer	ERNEST R. ACKER	Brooklyn, N. Y.
Assistant Treasurer	JOSEPH L. LLEWELLYN	Brooklyn, N. Y.
Managing Director	ALEXANDER FORWARD	New York, N. Y.
Secretary	KURWIN R. BOYES	New York, N. Y.
Director, Publicity-Advg.	C. W. PERSON	New York, N. Y.
Director, Home Appl. Pl. Bur.	J. W. WEST, Jr.	New York, N. Y.
Sectional Vice-Pres.	E. N. KELLER	Philadelphia, Pa.
Sectional Vice-Pres.	R. J. RUTHERFORD	Worcester, Mass.
Sectional Vice-Pres.	H. CARL WOLF	Atlanta, Ga.
Sectional Vice-Pres.	HARRY D. HANCOCK	New York, N. Y.
Sectional Vice-Pres.	D. P. HARTSON	Pittsburgh, Pa.

FRANK H. ADAMS	Toledo, Ohio	D. W. HARRIS	Shreveport, La.
JOHN W. BATTEN	Detroit, Mich.	CONRAD N. LAUER	Philadelphia, Pa.
WALTER C. BECKJORD	New York, N. Y.	H. N. MALLON	Bradford, Pa.
JAMES B. BLACK	San Francisco, Calif.	CLIFFORD E. PAIGE	Brooklyn, N. Y.
A. F. BRIDGE	Los Angeles, Calif.	FRANK H. PAYNE	Erie, Pa.
JAMES A. BROWN	New York, N. Y.	BRUNO RAHN	Milwaukee, Wisc.
C. M. COHN	Baltimore, Md.	HERMAN RUSSELL	Rochester, N. Y.
H. L. DICKERSON	New York, N. Y.	LOUIS RUTHENBURG	Evansville, Ind.
C. E. GALLAGHER	Cleveland, Ohio	N. T. SELLMAN	New York, N. Y.
N. HENRY GELLERT	Philadelphia, Pa.	MARCY L. SPERRY	Washington, D. C.
R. H. HARGROVE	Shreveport, La.	P. S. YOUNG	Newark, N. J.

SECTION OFFICERS

ACCOUNTING—Chairman	E. N. KELLER	Philadelphia, Pa.
Vice-Chairman	LYMAN L. DYER	Dallas, Texas
Secretary	O. W. BREWER	New York, N. Y.
RESIDENTIAL—Chairman	R. J. RUTHERFORD	Worcester, Mass.
Vice-Chairman	E. J. BOYER	Minneapolis, Minn.
Secretary	J. W. WEST, Jr.	New York, N. Y.
INDUSTRIAL AND COMMERCIAL GAS—Chairman	H. CARL WOLF	Atlanta, Ga.
Vice-Chairman	GEORGE F. B. OWENS	Brooklyn, N. Y.
Secretary	EUGENE D. MILENER	New York, N. Y.
MANUFACTURERS—Chairman	W. E. DERWENT	Rockford, Ill.
NATURAL GAS—Chairman	HARRY D. HANCOCK	New York, N. Y.
Vice-Chairman	J. FRENCH ROBINSON	Cleveland, Ohio
Secretary	E. H. POE	New York, N. Y.
TECHNICAL—Chairman	D. P. HARTSON	Pittsburgh, Pa.
Vice-Chairman	HAROLD L. GAIDRY	New Orleans, La.
Secretary	A. GORDON KING	New York, N. Y.
PUBLICITY AND ADVERTISING COMMITTEE—Chairman	C. A. TATTERSALL	New York, N. Y.

A. G. A. TESTING LABORATORIES—1032 East 62nd Street, Cleveland, Ohio
1425 Grande Vista Avenue, Los Angeles, Calif.

Chairman, Managing Committee	N. T. SELLMAN	New York, N. Y.
Director	R. M. CONNER	Cleveland, Ohio
Supervisor, Pacific Coast Branch	W. H. VOGAN	Los Angeles, Calif.

WASHINGTON OFFICE:
George W. Bean, Fuel Consultant, Albee Bldg., Washington, D. C.

PRINTED IN U. S. A.